E-POSTER

PO01 - EPOSTER

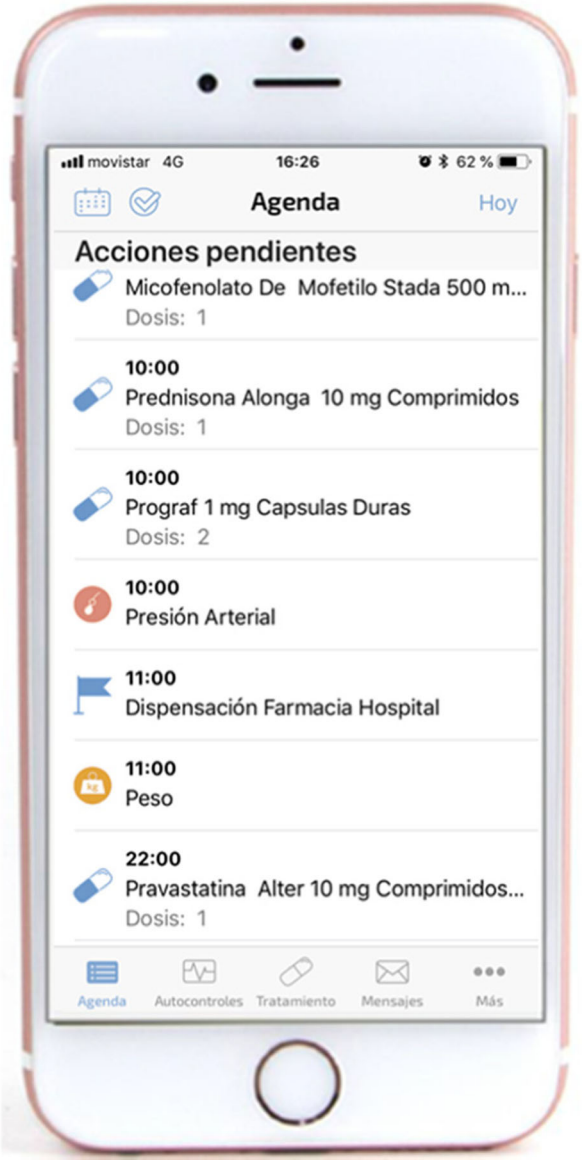
PO001 IMPACT OF A MOBILE HEALTHCARE PROGRAMME ON THERAPEUTICAL ADHERENCE IN NEW HEART TRANSPLANT RECIPIENTS: THE VAL-MHEART STUDY

Mar Gomis-Pastor, Sonia Mirabet, Vicens Brossa, Laura Lopez, MAntonia Mangues, Eulalia Roig
Hospital de la Santa Creu i sant Pau

Context and Aim: Low therapeutical adherence (TA) to immunosuppressive drugs is one of the main factors that determine the survival of heart transplant recipients (HTx). The aim of this study is to measure the TA improvement by means of a comprehensive care programme in a multidisciplinary environment, together with the support of Mobile Health Technology (mHealth).
Materials and methods: A prospective pilot study was carried out. Patients who had received a HTx in the past 18 months and had a mobile device were included. TA was assessed by the SMAQ validated test at the beginning and end of the two-months follow-up. Personalized interventions on-line via the mHeart platform were performed. The mHeart platform is an APP and a website directed to facilitate communication, treatment adherence and patient empowerment. An independent statistician analysed the data (IBM-SPSS V22.0).
Results and discussion: Of the 35 eligible recipients, 32 (91.4%) were included in the study; 23 (71.9%) were men of an average age of 52.4 years [42.9–63.7] taking a median of 12 [8.5–14] different daily drugs. The follow-up time was 2.03 months [1.3–2.5].

The effectiveness of the pharmaceutical interventions implemented through the mHeart tool was high: 83% of the nonadherent recipients in the first visit became adherent at the end of the study according to the SMAQ test.

Medication adherence global rate in the first visit was 61%, increasing to 87% at the last visit according to the SMAQ test ($p = 0.039$). The final TA figure was over 85%, the target medication adherence figure in solid organ transplants to avoid negative results due to non-adherence.
Conclusions: Personalized interventions together with the support of the mHeart tool, permits effective supervision of nonadherent patients, resulting in the improvement in TA. The final TA figure was over 85%, the target figure in SOT to avoid negative results due to non-adherence.



PO002 SURGICAL OUTCOMES OF RENAL TRANSPLANT RECIPIENTS AFTER ABDOMINAL SURGERY NOT CONNECTED WITH TRANSPLANTATION. A CASE-MATCHED STUDY

Ann-Kathrin Lederer[1], Dominic Haffa[2], Verena Martini[3], Roman Huber[4], Frank Makowiec[5], Stefan Fichtner-Feig Fichtner-Feigl[3], Lampros Kousoulas[6]
[1]Center for Complementary Medicine Institute for Infection Prevention and Hospital Epidemiology, Medical Center – University of F; [2]Department for General and Visceral Surgery, Medical Center – University of Freiburg, Faculty of Medicine, University of Freibur; [3]University of Freiburg Medical Center, Faculty of Medicine, University of Freiburg; [4]Center for Complementary Medicine Institute for Infection Prevention and Hospital Epidemiology , Medical Center – University of Freiburg; [5]Quality management, Medical Center – University of Freiburg, Faculty of Medicine, University of Freiburg, Germany; [6]University of Freiburg Medical Center, Faculty of Medicine, University of Freiburg

Background and objectives: Due to the increasing number of patients after kidney transplantation, elective and emergency surgery of transplanted patients is becoming a relevant challenge in clinical routine. The current data on complication rate of patients after kidney transplantation, which must undergo another elective or emergency abdominal surgery, is inhomogeneous. Therefore, the aim of our study was to evaluate the outcome of renal transplant patients undergoing abdominal and abdominal wall surgery.
Design, setting, participants, and measurements: We performed an observational study of patients after kidney transplantation undergoing graft-unrelated abdominal surgery between 2005 and 2015. We randomly created a non-transplanted control for a case-matched controlled analysis. Primary endpoint was the comparison of complication rate. Secondary, a risk analysis of all patients was performed and differences in mortality, length of hospital stay and reoperation rates were calculated.
Results: Overall 101 kidney transplanted patients were eligible for inclusion. 20 (19.8%) died after graft-unrelated surgery and 60 (59.4%) suffered from postoperative complications. Case-matched analysis could be performed for 84 out of these 101 patients. We found no significant difference in morbidity rate (58.3% vs. 45.2%, $p = 0.090$). Transplanted patients had, however, a significantly higher mortality (19% vs. 2.4%, $p = 0.001$), a longer hospital stay (28.2 vs. 16.9 days, $p = 0.020$) and a higher rate of re-operations (38.1% vs. 20.2%, $p = 0.017$). .
Conclusions: Patients after renal transplantation undergoing graft-unrelated abdominal surgery have a significantly increased mortality risk, are more frequently re-operated and have to stay significantly longer in hospital than non-transplanted patients.

PO004 DE-NOVO GLOMERULONEPHRITIS IN SIMULTANEOUS PANCREAS-KIDNEY TRANSPLANTATION: A SINGLE CENTER REPORT

Franka Messner[1], Valeria Berchtold[1], Michael Rudnicki[2], Hannes Neuwirt[2], Rupert Oberhuber[1], Manuel Maglione[1], Dietmar Öfner[1], Stefan Schneeberger[1], Christian Margreiter[1], Claudia Bösmüller[1]
[1]Department of Transplant Surgery/Medical University of Innsbruck;
[2]Department of Nephrology/Internal Medicine/Medical University of Innsbruck

Background: Retrospective center analysis of kidney and pancreas graft function, patient survival, major complications in 3 cases of biopsy proven de novo glomerulonephitis (GN) after simultaneous pancreas kidney transplantation (SPK).
Methods/Materials: The immunosuppression consisted initially of ATG, Tacrolimus, MMF, steroids and of Tacrolimus plus MMF at the occurrence of GN. The biopsy indication was an increase of serum creatinine and proteinuria (GN treatment: ACE-inhibitor / prednisolone).
Results: After a mean kidney survival of 118.6 months three patients (out of totally 435 SPK performed 1979–2007) developed a de novo GN at month 81/ 125/ 150 respectively, leading to graft loss after mean 17 months. One pancreas graft is functioning, one failed for thrombosis (month 1; retransplantation: chronic rejection, month 71), one for chronic rejection (month 149). The long-term immunosuppression at the time of occurrence of GN consisted of TAC (mean trough level 6.8 ng/ml) and MMF. The indication for biopsy was an increase of serum creatinine (mean 2.6 mg/dl) and proteinuria (mean 3,660 mg/l). No critical infectious complication or malignancy occurred before the GN and no patient ever received an mTOR-inhibitor.
Conclusion': De novo GN after SPK occurred at mean 118 months posttransplant (incidence of 0.007% correlating to the reported inferior limit of de novo GN after single-kidney transplantation) leading to graft lost after mean 17 months. An early biopsy in case of even mild proteinuria within normal serum creatinine is favorized. Further series reporting on this very rare complication would be useful to learn its detailed mechanisms.

PO006 IMPACT OF DONOR AGE ON RECIPIENT RECURRENCE RATE AND SURVIVAL IN LIVER TRANSPLANTATION DUE TO HEPATOCARCINOMA

Mikel Prieto Calvo, Mikel Gastaca, Patricia Ruiz, Alberto Ventoso, Ibone Palomares, Andrés Valdivieso
Cruces university hospital

Background: Given the increase in hepatic transplants due to hepaticarcinoma (HCC) and the increasingly frequent use of elderly donors in liver transplantation (LT), our objective is to study whether there are significant differences in the results of LT for HCC, depending on whether the donor was $^{3}65$
Methods and Material: From January 2006 to December 2015, 240 LT for HCC were performed, minimum follow-up of 2 years. 8 LT were excluded due to mortaility in the first 3 months.130 LT with donors < 65 years (Group A) and 102 with donors ≥ 65 years (Group B) were performed.. Variables related to the characteristics of donors and recipients, surgery, pre and post-transplant HCC studies, post-transplant evolution, recurrence data, and survival after 1 , 3, 5 and 10 years have been studied. The statistical package "Stata 15.1 for Windows" was used. Results: Patients with older donors spent less time on the waiting list (118 vs.147 days) ($p = 0.0065$), and HCV was less frequently the ethiology of the cirrhosis, Group A 66.2% and Group B 35.7%($p = 0.000$). There were no significant differences in the rate of recurrence depending on the age of the donors, ($p = 0.427$), but LT with older donor developed recurrences earlier (576 vs.725 days) ($p = 0.0424$). . Survival at 1, 3, 5 and 10 years was 95%, 86%, 81.5% and 77.5% in group A and 94%, 89%, 86% and 80% in group B, without differences ($p = 0.5292$).
Conclusion: LT with older donors presented recurrence earlier.No statistically significant differences were found in the rate of recurrence of HCC or in the survival of LT due to HCC depending on the age of the donors. It does not seem necessary to implement a donor selection system for patients with HCC, in which older donors are restricted.

PO007 IMPACT OF COLD ISCHAEMIC TIME (CIT) ON RENAL ALLOGRAFT OUTCOME; FOUR YEAR FOLLOW UP

Abdulwhab Elmghrbee, Sabry Abounozha, Adli Idrees, Dan Ridgway, Abdelkader Hammad
Royal Liverpool University Hospital

Introduction: The impact of CIT on deceased donor kidney transplant outcome remains unclear.Aim of study to evaluate the effect of CIT on patient and graft survival as primary endpoints. While the rate of biopsy proven rejection, ureteric complications, BK, and CMV viremia were assessed as secondary endpoints.
Methods: a single- centre retrospective cohort study of 271 kidney recipients from cadaveric donors transplanted between April 2014 and March 2014. period of follow-up was fours years.The cohort divided into CIT less than 12 h ($n = 77/271$) and 12 h or more ($n = 194/271$).
Results: Allograft biopsy rate were 36.5%.More biopsy carried out in ≥ 12 h CIT 27.3% than in < 12 h CIT 9.2 %.Biopsy proven acute tubular necrosis was higher when CIT ≥ 12 h, 14% versus 5.5% when CIT < 12 h. Acute rejection was more frequent in CIT ≥ 12 h than in < 12 h, was 9% and 3%, respectively ($p = 0.8349$).BK viremia rate were 21.8 %, of which 16.6 % in ≥ 12 h CIT group versus 5.2 % in the < 12 h CIT group ($p = 0.4172$). CMV viremia was higher in the CIT ≥ 12 h 20% vs.8.1% in the CIT < 12 h group.More ureteric complication in CIT ≥ 12 h than in CIT < 12 h group, was 2.2% and less than 1%, respectively ($p = 0.6771$).Overall graft survival was 79.3 % and death-censored graft survival (graft survival without death) was 90.4%. Overall graft loss (including death) was 20.7%, while death-censored graft loss was 9.6% of which 7.75% in CIT ≥ 12 h vs.1.8 % in CIT < 12 h group ($p = 0.3625$). Patient survival was 86% . All-cause mortality were 14%. More death seen in CIT ≥ 12 h than in CIT < 12 h group, was 11% and 3%, respectively.
Conclusion: graft and patient survival was 79.3% and 86%, respectively. There was no significant difference statistically between both groups. our results suggest that kidneys with prolonged CIT offer acceptable outcomes to recipients and are a potential source to expand the donor pool.

PO008 AN ANALYSIS OF PANCREAS TRANSPLANTATION OUTCOMES BASED ON ERA – A SINGLE CENTER EXPERIENCE: 400 CASES

Ji Yoon Choi[1], Jee Yeon Kim[2], Hyunwook Kwon[2], Sung Shin[2], Young Hoon Kim[2], Duck Jong Han[2]
[1]Asan Medical Center; [2]Division of Kidney and Pancreas Transplantation, Department of Surgery, University of Ulsan College of Medicine and Asan Medical

Background: Pancreas transplant is considered as an effective treatment strategy to restore long-term euglycemia and stabilize the multiorgan complications. By June 2019, our center performed more than 400 cases of pancreas transplantation and this represents the largest volume for a single institution in the Korea. In this study, we analyze the graft outcomes and risk factors according to era based on the number of cases.
Methods: We reviewed 400 cases of pancreas transplantation which performed from July 1992 to June 2018. Patients were divided into groups based on every 100 cases and we compared survival outcomes and demographics between each groups.
Results: During the period, 178 (44.5%), 134 (33.5%), 47 (11.8%) and 41 (10.2%) patients underwent SPK, PTA, PAK, and SPLK, respectively. Patient survival at 1, 3, 5, and 10 years was 97.1%, 94.6%, 92.9%, and 90.6%. Overall graft survival was 88.9%, 80.6%, 75.4%, and 66.7%, respectively. And death-censored graft survival was 90.1%, 83.1%, 78.5%, and 69.9%, respectively. Based on the operation type, SPK showed the highest patient and graft survival significantly. In multivariate analysis, bladder drainage and history of pancreas graft rejection were a risk factors for graft failure ($p = 0.034$ and 0.00). The Era 1 (1–100) showed the lowest (77.6%) and the Era 4 (301–400) showed the second lowest (89.8%) graft survival at 1 year after transplant. When, we compared the clinical characteristics between Era2, 3, and 4, thrombosis, thrombectomy, and pancreas rejection history were more common in Era 4 (50%, 11%, and 20%, respectively), when we excluded Era 1. The largest portion of cause of graft failure was chronic rejection (33.9%, 538%, and 60.0%) in Era 1, 2, and 3. However, thrombosis rate was significantly increased up to 45.5% in Era 4 ($p = 0.015$).
Conclusion: Pancreas transplantation can be performed safely with excellent outcomes as an effective treatment option for patients for DM. However, the recipients with history of thrombosis.

PO009 ACTIVATION OF FK506 INDUCED CYTOTOXICITY THROUGH APOPTOTIC PATHWAYS IN JURKAT T CELLS

Sang Young Chung
Chonnam National University Hospital

Purpose: To elucidate the mechanism of cytotoxicity in FK506-treated Jurkat T cells, signal transduction pathway of TNF-related events was studied.
Methods: Viability of Jurkat T cells was measure by MTT assay. The catalytic activation of caspase-3 and caspase-9 proteases was determined by digestion of fluorogenic biosubstrates and Western blot with anti-caspase-3 and anti-caspase-9 antibodies. The levels of mRNA and proteins for p53, Bax, PUMA, Proline oxidase, TRAIL (TNF related apoptosis inducing ligand), TRAIL-R1 (DR4), TRAIL-R2 (DR5), Fas, FasL, TNF-α , IL-6, and NFκB were measured by RT-PCR and Western blot with specific antibodies. Also we further examined the localization of TRAIL family proteins using by fluorescent microscope with specific TRAIL family antibodies.
Results: FK506 decreased the viability of Jurkat T cells concentration- and time-dependently along with catalytic activation of caspase-3 and caspase-9,

p53 phosphorylation, and changes in expression levels of Bax, PUMA, and Proline oxidase protein. It caused an increase in expression of TRAIL, TRAIL-R1 (DR4), TRAIL-R2 (DR5), Fas, and FasL in the levels of mRNA and proteins of Jurkat T cells. Furthermore, FK506 increased extracellular release of TNF-α and IL-6 cytokines in Jurkat T cells. It also induced the transactivation of NFκB through the dephosphrylation of Ser486 residues in Jurkat t cells.
Conclusion: These results suggest that FK506 induces apoptotic death of Jurkat cells through activation of caspase family protease, Bcl2 family protein-related mitochondrial dysfunction, activation of TNF-related death-receptor.

PO010 POST MORTEM HISTOPATHOLOGICAL EXAMINATION OF THE ORGANS NON ACCEPTED FOR TRANSPLANT PURPOSES

Martin Chrastina, Zuzana Zilinska
University Hospital Bratislava

From the 1/2015 to 9/2018 there were 74 organ donors available for organ procurement in our centre. The autopsy was done in 70 out of them (95%). 4 donors - children were not aupsied as the coroner respected the will of the parents. Our aim was to define the percentage of primary non accepted organs by the hospital coordinator or by the transplant centre based on different reasons (clinical, medical history, laboratory parameters and others) and therefore to correlate the outcome with definitive histopathological evaluation of non accepted organ. Results: The liver was accepted 37 x, nonaccepted 37 x In 5 out of 74 the was completely normal histopathological finding with no fibrosis, necrosis or steatosis. The reason of non acceptance was mainly the high activity of ALT. Heart: accepted 22x, nonaccepted 52 x. All of the non accepted heart autopsies has shown pathological finding (mainly severe CAH). Lungs: Accepted 10x, nonaccepted 64x, 2 times there were normal histopathological finding. Main reason of non accepting the organ was the bad arterial gasses. Kidneys were accepted in 122 cases, 22 non accpted kidneys has shown more then 20% glomerulosclerosis, or hogh rate of interstitial fibrosis.
Conclusion: The autopsy of the non accepted organs may be usefull feedback for the future decisions of transplant coordinator or transplant centre, as we have found 7 histopathologicaly completely normal organs which may save life.

PO011 RISK FACTORS FOR ACUTE KIDNEY INJURY IN PATIENTS UNDERWENT LIVER TRANSPLANTATION AND EFFECT EVALUATION OF TERLIPRESSIN ON ACUTE KIDNEY INJURY MANAGEMENT

Qinggi Ren[1], Weiqiang Ju[2], Xiaoshun He[2]
[1]Peking University Shenzhen Hospital;; [2]The First Affiliated Hospital of Sun Yat-sen University

Objective: To screen the risk factors for acute kidney injury (AKI) in liver recipients post liver transplantation (LT) and evaluate the effects of terlipressin in its management.
Methods: The data of patients underwent LT during October 2012 to June 2016 was retrospectively analyzed. Univariable analysis was used to screen the risk factors and the independent risk factors were identified through multivariable logistic regression. Then comparison was made between patients with AKI treated with and without trelipressin.
Results: A total of 124 patients were enrolled and the incidence of AKI post LT was as high as 53.2%. The status of patients admitted and before, surgery related factors and graft related factors were significantly different between patients with and without AKI. Further analysis indicated that ALB level at the time of admitted, the lowest level of lactic acid post liver reperfusion, the highest AST level post transplantation and carbon dioxide binding power before surgery were independent risk factors for patients suffering AKI post surgery. As for the effect evaluation of Terlipressin, no significant difference of serum creatitine was observed before and post liver transplantation, while the stage of AKI, the Child-Pugh score and MELD score in patients recerving terlipressin was significantly higher than that in patients receiving no terlipressin. Also there were lower ALB level, higher lactic acid level, higher AST level and lower carbon dioxide binding power in patients receiving Terlipressin, but was not significantly different.
Conclusion: The incidence of acute kidney injury was still high in patient underwent liver transplantation. More attention should be paid on the patients with relative risk factors. As for the effects of terlipressin, severe patients seemed to benefit from its usage, however, further study with enlarged population was needed, wihich may provide a more convincing results.

PO012 OUTCOME OF DONOR HEPATECTOMY: SINGLE CENTER EXPERIENCE

Hakan Sozen[1], Ali Sapmaz[2], Selcuk Hazinedaroglu[3], Aydin Dallgic[1]
[1]gazi university; [2]Numune hospital; [3]ankara university

Donor hepatectomy for living liver transplantation is widely used, especially in countries with a lack of brain death donors.
Material and methods: A total of 64 donor hepatectomies was performed at Gazi University Transplantation Center since 2006. All data were collected retrospectively from hospital charts. The first step in donor evaluation is whole blood tests, viral load, blood group analysis. Later, all donors evaluate the transplantation surgery, gastroenterology, pulmonary, cardiologic and psychiatric teams. Then, MR cholangiography (MRC) is performed with CT angio to evaluate the hepatic vascular and biliary tree anatomy.If MRC is not satisfactory, intraoperative cholangiography was performed.
Results: : Of the 64 donors, 38 were female and 26 were male subject. There were first degree 34, second degree 23, third degree 5 and non-relatives 2 were identified. The mean age of the donor was 33.6 $\pm$ 7.5 years (range 21–52 years).The mean BMI of the donor was 27.2 $\pm$ 1.9 (median 27). Donor hepatectomy was performed in 23 donor as right, in 23 donor as left, and in 18 donor as left lateral (LL) lobectomy. The mean liver volume for right hepatectomy was 33.8 $\pm$ 4%(median 35%) and the right lobe median graft-recipient body weight ratio 1.7%(0.9–2.5%) and mean intraoperative blood transfusion 1.2 $\pm$ 1.4U (0–10). The duration of the stay of the donors in the median was 9 days (6–28).Early surgical complication (bleeding) was detected in only one patient in the grade III Clavien system. This patient was immediately re-explored. Bleeding was originating from left gastric artery (LGA) stump (LL's artery was originating from LGA).After uneventful early postoperative follow-up, he was discharged in postoperative D7. Cholangitis was developed in two donors after surgery at PO3 and PO5. Donors received antibiotic treatment and discharged without any problem POD14, POD13 respectively. We have not seen any vascular complications after surgery.
Conclusion: we believe that donor hepatectomy is a safe precedure.

PO013 THE VALUE OF PRETRANSPLANT ALBUMIN-BILIRUBIN SCORE IN PREDICTING OUTCOMES AFTER LIVER TRANSPLANTATION

Tao Ma, Qingshan Li, Yue Wang, Bo Wang, Zheng Wu, Yi Lv, Rongqian Wu
First Affiliated Hospital of Xi'an Jiaotong University

Background: The Albumin-Bilirubin (ALBI) grading system was recently developed to identify patients at risk for adverse outcomes after hepatectomy. However, the value of pretransplant ALBI score in predicting outcomes after liver transplantation has not been assessed. The purpose of the present study was to retrospectively investigate the value of pretransplant ALBI score in predicting outcomes after liver transplantation.
Methods: : The clinical data of 272 consecutive adult patients who received donation after cardiac death and underwent liver transplantation in our center from March, 2012 to March, 2017 were analyzed in the cohort study. After the exclusion of patients who met any of the exclusion criteria, 258 patients remained. The performance of the ALBI score in predicting overall survival and postoperative complications after liver transplantation was evaluated.
Results: The preoperative ALBI score had a significant positive correlation with the overall survival rate after liver transplantation The calculated cut-off for ALBI scores to predict postoperative survival was -1.48. Patients with an ALBI score >-1.48 had a significantly lower survival rate than those with an ALBI score ≤ -1.48 (73.7% vs. 87.6%, $p < 0.05$). And a high ALBI score was also associated with increased incidences of postoperative complications after liver transplantation.
Conclusion: The ALBI score predicted overall survival and postoperative complications after liver transplantation. The ALBI grading system may be useful in risk stratifying patients on the liver transplant waiting list.

PO017 NEUTROPHIL-TO-LYMPHOCYTE RATION PREDICT ACUTE CELLULAR REJECTION IN THE LIVING DONOR LIVER TRANSPLANTATION

Jai Young Cho
Department of Surgery, Seoul National University, College of Medicine

Background: Despite improvements in immunosuppression, acute cellular rejection (ACR) remains an important cause of morbidity in living donor liver transplantation (LDLT). Liver biopsy is used for the diagnosis of ACR, but complications are inevitable due to its invasiveness. The neutrophil-to-lymphocyte ratio (NLR) have been shown to predictors of inflammation and elevated NLR significantly increase the risk for tumor recurrence and recipient death in liver transplantation. The aim of the study is to evaluate that there is a correlation between NLR and ACR and whether it can be used as a non-invasive marker for ACR prediction.
Material and methods: This was a retrospective study that included all patients who underwent a liver biopsy from 2009 to 2017. If the patient received multiple biopsies during the study period, only the first biopsy included. NLR

was calculated 4 weeks before transplantation, and transplantation and immediately prior to biopsy.
Results: A total of 81 patients were reviewed (ABO compatible (ABOc) = 66, ABO incompatible (ABOi) = 15). Patients who showed ACR findings, ABOc and ABOi were 19 (28.8%) and 10 (66.7%), respectively. The number of patients who had ACR within one month after transplantation was 15 (78.9%) and 7 (70%). We analyzed the NLR of ACR group and no ACR group within one month after transplantation. In the ABOc group, there was no significant difference 4 weeks before transplantation (ACR : no ACR = 2.54 ± 1.15 : 3.68 ± 2.08, $p = 0.06$) and transplantation (ACR : no ACR = 20.53 ± 13.39 : 17.73 ± 8.74, $p = 0.06$). However, NLR at immediately prior to biopsy was significantly lower in ACR group (ACR : no ACR = 5.82 ± 3.42 : 28.66 ± 22.66, $p =< 0.001$). In case of ABOi, there was no significantly difference NLR (4 weeks before transplantation NLR, $p = 0.36$; Transplantation NLR, $p = 0.16$; Immediately prior to biopsy NLR, $p = 0.45$) between 'ACR' and ' no ACR' in both groups. When analyzing the liver function test (LFT) of the group of 'ACR' and 'no ACR' in ABOc

PO018 OUTCOMES AFTER HEART-LUNG COMBINED TRANSPLANTATION-SINGLE CENTER EXPERIENCE

Dewei Ren[1], Edward Graviss[1], Duc Nguyen[1], Erik Suarez[1], Matthias Loebe[2], Scott Scheinin[3], Brian Bruckner[1]
[1]Houston Methodist Hospital;; [2]Miami Transplant Institute; [3]Montefiore Medical Center

Introduction: Combined heart and lung transplants are rare.The number of the procedures plateaued around 100 cases per year during the most recent decade worldwide according to UNOS report. We report our large single center experience with heart-lung transplantation.
Methods: Houston Methodist Hospital's (HMH) data for heart-lung transplants from 01/2004 through 07/2018 were abstracted from the UNOS STAR file. Baseline characteristics were reported. Patient survival was presented using the Kaplan-Meier survival curves. Difference between groups was compared using the log-rank test. Cox proportional hazards modeling were used to determine the risk factors associated with the patient's poor outcome.
Result : A total of 41 heart-lung transplants were performed at HMH over the 14 year period. The recipients had a median of 50 years and median lung allocation score of 38.5. There were 26 (63%) recipients being classified in Status 1A and 1B. The main indications for heart-lung transplant were primary pulmonary hypertension, pulmonary fibrosis and chronicle obstructive pulmonary disease (COPD) combined with end-stage heart diseases, e.g. dilated myopathy, valve heart disease, or congenital malformation. The 30-day, 1-, 3- and 5-year survival for all recipients were 90%, 76%, 62%, and 54%, respectively. The stratification by gender indicated that male recipients ($n = 22/41$) has a poor 5-year survival than that of female recipients (28% vs. 76%, respectively). Multivariable Cox proportional hazards modeling indicated that age > 65 years and male gender were significantly associated with mortality within 5 years after transplant. Primary graft failure and operation related bleeding appeared to be the major causes of 30-day mortality. Grafts losses occurred in 29% cases within the first year.
Conclusions: Our finds showed that heart-lung transplantation has a fairly good short-term and long-term outcome. Older age and male gender are associated with a higher mortality.

PO019 LIVING LIVER DONOR SURGICAL COMPLICATION: SINGLE CENTER EXPERIENCE WITH 512 CASES

Eun-kyoung Jwa[1], Dong-Lak Choi[2], Joo-Dong Kim[1]
[1]Daegu catholic university medical center;; [2]Daegu catholic medical center

Background: Korea is the one of the most common country to do living donor liver transplantation. But almost big liver transplantation center is in Seoul which is capital of Korea. Beside Seoul, There are no big living donor liver transplantation center except Dague catholic university medical center. We were reached to 500th living donor liver transplantation in 2017. We review our donor complication and find way to reduce the rate of morbidity.
Methods: Institutional LT database was searched from 2005.05.08. to 2017.12.31. Their medical records and imaging studies were reviewed.
Result: From 2005.05.08 we did first living donor hepatectomy, we did 512 living donor hepatectomy until 2017.12.31. Among them, 324 were male and 188 were female. Graft types were Right liver graft in 457 (89.3%), Left liver graft in 47 (9.2%), Left lateral section graft in 2 (0.4%) and Right posterior section graft in 6 (1.2%). Mean age of total donor was 30 years and Mean BMI was 22. Mean hospital days was 10 days. All of the donors, surgical complication occurred in 32donors.(6.3%) Minor complication was 10 cases (1.9%). Major complication was 24case.(4.7%) Between major complication, the most common complication was biliary complication ($n = 17$) and the Other complications were small bowel obstruction operation (2), , bleeding control ($n = 2$), pleural effusion drainage ($n = 2$), portal vein stent insertion ($n = 1$). There are no mortality. The most common complication was biliary complication which were 20cases (3.8%). Among them intra-op T-tube insertion were 9 case and 3 case were PTBD insertion and 3case did ERCP. There are re-operation case was just one case, which was immediate right hepatic artery bleeding.
Conclusion: Our center's complication was very low. But still biliary complication is the most common complication. When we meet abnormal biliary anatomy we must be careful and we try to reduced biliary complication.

PO020 ANALYSIS OF THE PREVALENCE OF SYSTEMIC DE NOVO THROMBOTIC MICROANGIOPATHY AFTER ABO-INCOMPATIBLE KIDNEY TRANSPLANTATION AND THE ASSOCIATED RISK FACTORS: A RETROSPECTIVE STUDY

Masayuki Tasaki[1], Kazuhide Saito[1], Yuki Nakagawa[1], Naofumi Imai[1], Yumi Ito[1], Yutaka Yoshida[1], Ichiei Narita[1], Kota Takahashi[2], Yoshihiko Tomita[1]
[1]Niigata Graduate School of Medical and Dental Sciences; [2]Otsukadai clinic

Background: Systemic *de novo* thrombotic microangiopathy (TMA) is characterized by rapidly progressing renal graft dysfunction and leads to early graft loss more frequently than localized TMA in the graft. The prevalence and the risk factors of systemic *de novo* TMA have never been reported for the patients who received ABO-incompatible kidney transplantation (KTx).
Materials and methods: A total of 201 patients (114 patients with ABO-identical KTx and 87 patients with ABO-incompatible KTx) were retrospectively analyzed. Clinical and laboratory information was extracted from electronic databases and the patients' medical records. Systemic post-transplant *de novo* TMA was diagnosed clinically according to the presence of thrombocytopenia with microangiopathic hemolytic anemia in the absence of any other apparent clinical cause with pathological findings of TMA.
Results: All systemic *de novo* TMA was detected in ABO-incompatible KTx patients within 4 weeks following KTx ($n = 15$, 7.5%). Multivariate logistic regression analysis revealed that non-use of mycophenolate mofetil (MMF), pre-treatment IgG antibody titer ≥ 64 fold, pre-transplant IgM antibody titer ≥ 16 fold and antibody mediated rejection were significant risk factors for systemic *de novo* TMA in ABO-incompatible KTx. Microvascular inflammation of 1-h posttransplant biopsy could be observed more frequently in TMA patients than in non-TMA patients. Anti-A and anti-B antibodies purified from human plasma showed a strong *in vitro* reaction against human kidney when the antibody titer was ≥ 16 fold.
Conclusions: The antibody titer should be decreased to ≤ 16 fold till the day of ABO-incompatible KTx by desensitization therapy including MMF to avoid systemic *de novo* TMA in the present circumstances. The 1-h posttransplant biopsy results may help to diagnose systemic *de novo* TMA.

PO021 CLINICAL VALUE OF POST-TRANSPLANT PROTOCOL BIOPSIES IN TWO BILIARY AUTOIMMUNE LIVER DISEASE – STEP TOWARDS PERSONALIZED IMMUNOSUPPRESSIVE TREATMENT

Marko Vannas, Johanna Arola, Arno Nordin, Helena Isoniemi
Helsinki University Hospital

Aim: We compared the protocol biopsies of primary sclerosing cholangitis patients (PSC) with primary biliary cholangitis patients (PBC) to assess the clinical usefulness of these biopsies.
Methods: Between January 2009 and May 2015 altogether 250 protocol biopsies were performed in 182 PSC and PBC liver transplant (LTx) patients. A total of 14 histological parameters were scored. Histopathological findings were compared between PSC and PBC patients and we also analyzed if the histopathological findings caused changes in immunosuppression. For 81 patients a follow-up biopsy after the first protocol biopsy was available and the possible changes between a protocol biopsy and a subsequent follow-up biopsy were analyzed.
Results: Mean time to protocol biopsy after transplantation was 5.5 (±4.5) years for PSC patients and 9.3 (±6.6) years for PBC. PSC patients had less findings in their protocol biopsies than PBC. Histology was entirely normal in 26% of PSC patients and in 12% of PBC patients. There were often mild histopathological findings. Recurrence of primary liver disease was more common in PBC patients compared with PSC (15% vs.3%, $p = 0.001$). In 10% of the cases immunosuppression was reduced and in 6% increased. The group with increased immunosuppression had more portal ($p = 0.002$), interphase ($p = 0.021$) and parenchymal inflammation ($p = 0.000$) as well as portal arterial obliteration ($p = 0.026$) compared to the group without changes in immunosuppression caused by protocol biopsy.
Conclusion: Mild histopathological findings were rather common in both groups with normal biochemistry. PBC patients had more often pathological changes in protocol biopsies compared with PSC, however, they had longer follow-up. Recurrence of primary liver disease or graft hepatitis were the most common histopathological findings. Immunosuppression was changed in a total of 16% of patients based on histopathological report from protocol biopsy.

PO022 LIVER RE-TRANSPLANTATION IN JAPAN

Kaori Kuramitsu[1], Takumi Fukumoto[1], Hiroyuki Furukawa[2]
[1]Kobe University, Hepatobiliary and Pancreatic Surgery; [2]Asahikawa Medical University, Department of Surgery

Background: Liver transplantation is the only treatment option for end-stage liver disease. Although medical advances have led to improved patient survival post-transplantation, some recipients require re-transplantation.
Methods: Questionnaires were sent to 32 institutions in which a total of 281 re-transplantation were conducted before 2015.
Results: Among the 265 patients included in this study, the average age at primary transplantation was 23 years, and re-transplantation was performed at an average of 1,468 days after primary transplantation. Living-donor liver transplantation accounted for 94.7% of primary transplantations and 73.2% of re-transplantations. Patient survival at 1, 3, or 5 years did not differ between living- and deceased-donor transplantation, but was better for pediatric than for adult recipients (70.8%, 68.3%, 60.1% vs. 57.2%, 50.4%, 45.2%; $p = 0.0003$). Small-for-size syndrome, re-transplantation within 365 days after primary transplantation, and inpatient status at re-transplantation were significant predictors of poor survival in pediatric patients. Re-transplantation within 365 days after primary transplantation and conditions warranting re-re-transplantation were significant predictors of poor survival in adult patients.
Conclusions: From the study, it was revealed that currently liver re-transplantation in Japan is performed at much later timepoints compared to other countries. Re-transplantation within 365 days after primary transplantation should be decided after thorough discussion.

PO023 ERYTHEMA NODOSUM IN KIDNEY TRANSPLANT RECIPIENT

Danilo Radunovic, Vesna Furic Cunko, Ivana Juric, Lea Katalinic, Vladimir Prelevic, Nikolina Basic Jukic
Clinical Hospital Center Zagreb

Background: Erythema nodosum (EN) is a cutaneous inflammatory reaction, usually reported in young women, but it is rarely observed among transplant patients. Localization in the lower extremities is typical, mostly involving the anterior surfaces of the legs. Several viral, bacterial, mycotic, and non-infectious etiologies, such as autoimmune disorders, drugs, inflammatory bowel diseases, sarcoidosis, pregnancy, and malignancies, have been found. EN is rarely reported in kidney transplant patients. Until now 4 cases of EN in renal transplant recipients have been reported, histologically proven: 2 patients had tuberculosis infection; 1 had ulcerative colitis and IgA nephropathy; and the last 1 had been treated with ciprofloxacin and levofloxacin.
Materials and methods:
case report. :
Results: : Female patient, 55 years old, nine years ago treated with kidney transplantation form deceased donor. Previously she was treated with APD for four years. She had left nephrectomy previously due to vesicoureteral reflux, developed CKD in further period. She had standard immunosuppressive protocol with cyclosporine, mycophenolate mofetil and steroid, with basilix-imab in induction therapy. Six months ago she had left radius fracture. Due to chronic pain she was taking oral ketoprofen regularly. Three months later she developed bilateral, erythematous, warm nodules localized on the anterior surface of her legs. EN was diagnosed by skin biopsy; microscopic examination showed septal panniculitis with granulomas. The extensive clinical investigation rolled out autoimmune disorders, malignancies, tuberculosis, sarcoidosis , bacterial, viral and mycotic infections. As a complete remission of the lesions was obtained in our patient after interruption of ketoprofen therapy, we suspect that ketoprofen was in the pathogenesis of EN.
Conclusion: Treatment of EN should be directed to the underlying associated condition, if identified. Usually, nodules regress spontaneously in 3–4 weeks.

PO024 SEVERE TRANSUDATIVE ASCITES FOLLOWING SIROLIMUS USE IN A BREAST CANCER PATIENT AFTER KIDNEY TRANSPLANTATION

Jong-hyun Oh, Mun Jang
Yemidam hospital

Background: Immunosuppressants are essential for patients undergoing solid organ transplantation. The use of sirolimus, a rapamycin inhibitor, is important in patients at high risk of malignant neoplasm. There are an increasing number of reports of edematous adverse events associated with sirolimus. We report a sirolimus-treated kidney transplant recipient with fulminant and massive ascites.
Case: A 50-year-old female who had undergone post deceased donor kidney transplant (KT) 9 years prior was admitted with severe ascites. Induction of immunosuppression had consisted of cyclosporin, mycophenolate mofetil, and prednisolone. Kidney function remained stable with a serum creatinine level around 1.1 mg/dl, and other test results were unremarkable. Six years after KT, she was diagnosed with left breast cancer (stage Ia). She underwent breast-conserving surgery, followed by chemotherapy and radiotherapy. She had shown no evidence of disease (NED) until her recent presentation. The cyclosporin in her regimen was changed to sirolimus to prevent recurrence of breast cancer. Three years of regimen change, her serum creatinine level increased to 1.49 mg/dl, for which the dose of sirolimus was increased from 1 mg/day to 4 mg/day. Thereafter, she experienced weight gain of about 9 kg (50.55–60 kg) with severe ascites for 6 months. Fluid analysis results were suggestive of transudates. Other than increased inferior vena cava (IVC) pressure, there was no evidence to explain the occurrence of ascites. Use of sirolimus was the most likely cause, and sirolimus was replaced with tacrolimus. Three months after sirolimus cessation, she experienced weight loss of 10 kg or more, and no ascites was found.
Discussion: In terms of temporal correlation, sirolimus seemed to be the most likely cause. Furthermore, there was no alternative cause to explain this phenomenon.
Conclusions: Sirolimus should be considered a potential cause of visceral effusion caused by central venous contraction.

PO025 FK506 AGGRAVATES COBALT CHLORIDE INDUCED HEPG2 CYTOTOXICITY

Soo Jin Na Choi, Sola Lee
Chonnam National University Hospital

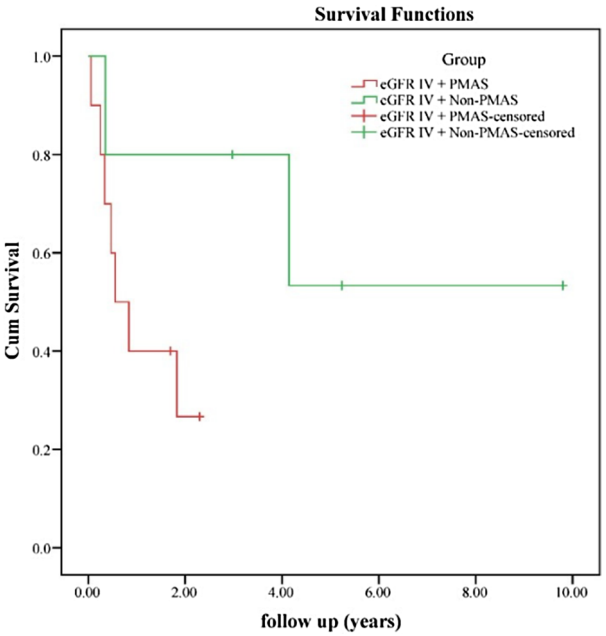
Background: The effects of FK506 on the endoplasmic reticulum (ER) mediated stress pathway accelerates cobalt chloride induced cytotoxicity in human hepatoma HepG2 cell line were investigated.
Methods: We examined the effects of FK506 on cobalt chloride induced cytotoxicity by western blots of poly ADP-ribose polymerase (PARP), CHOP, GRP78, Nrf2, ATF4, ATF6, XBP-1, Bak, Bax, and Bcl-2. And the catalytic activity of caspase-3 and -12 caspase in HepG2 cells was also measured.
Results: FK506 and cobalt chloride significantly induces the synergistic effect of HepG2 cytotoxicity in dose dependent manner. Increased active-PARP expression occurred at 24 h after FK506 treatment on cobalt chloride induced HepG2 cytotoxicity and peak activation of cleaved caspasec-3 was also observed at 24 h. FK506 aggravates cobalt chloride induced HepG2 cytotoxicity. GRP78 expression was increased 24 h after FK506 treatment on cobalt chloride induced HepG2 cytotoxicity. CHOP and caspase-12 expressions were increased 24 h after FK506 treatment on cobalt chloride induced HepG2 cytotoxicity. Expressions of ATF4 and ATF6 were same manners. Expression of XBP-1 was decreased beginning at 6 h. FK506 exasperate endoplasmic reticulum stress by cobalt chloride induced cytotoxicity. Bcl-2 protein expression decreased, but FK506 induces expression of Bak and Bax by cobalt chloride induced cytotoxicity. Nrf2 expression was also noted.
Conclusions: FK506 and cobalt chloride significantly induces the synergistic effect of cytotoxicity in dose dependent manner. FK506 aggravates cobalt chloride induced cytotoxicity. FK506 accelerates expression of ER-stress related nuclear transcriptional factor.

PO026 REDUCED EGFR AND PERSISTENT MASSIVE ASCITES AFTER LIVING DONOR LIVER TRANSPLANTATION ARE HIGHLY FATAL

Yi-Ju Wu/Yi-Ju, Chih-Che Lin, Chao-Long Chen, Ben-Chung Cheng, Lung-Chi Li, Chien-Hua Chiu
Kaohsiung Chang Gung Memorial Hospital

Background: Recipients with estimated glomerular filtration rate (eGFR) < 15 ml/min per 1.73 m2 on renal replacement therapy (RRT) after living donor liver transplantation (LDLT) are associated with significant mortality. Sequential kidney transplantation (SKT) is a well-established measure for these patients on RRT. However, a recipient with reduced eGFR, not on RRT after LDLT, is also risky in mortality. We try to assess and share our remedies for these recipients with reduced eGFR.
Methods: We retrospectively reviewed adult primary LDLT recipients without SKT from 2005 January to 2017 December after exclusion of early death (<14 days). The demographics and median data were collected from 3 months before LDLT and 2 weeks to 3 months after LDLT. The eGFR of renal function were stratified as I ≥ 90, II 60~89, III 30~59, IV 15~29, and V < 15 ml/min per 1.73 m2. Significant factors by multivariate regression were exposed as relative risk (RR) and 95% confidential interval (CI). The other receiving SKT were as SKT group.
Results: The 975 recipients were included as non-SKT group. Two pre-operative factors as sepsis 3.434 (2.318–5.088, $p < 0.001$) and hepatocellular carcinoma 1.981 (1.323–2.968, $p < 0.001$) and four post-operative as eGFR IV11.969 (5.485–26.117, $p < 0.001$), persistent massive ascites (PMAS) 1.731 (1.090–2.749, $p = 0.020$), total bilirubin 1.822 (1.099–3.022, $p = 0.020$), and asparate-transaminase 1.507 (1.018–2.229, $p = 0.040$) were significantly identified.There was no survival difference between eGFR I, II, and III. However, eGFR IV had the highest risk for mortality and worst survival in combined with PMAS. Conversely, the SKT group including 4 patients with eGFR IV and PMAS, not on RRT, and 6 patients with eGFR V on RRT was all 100% survival.

Conclusion: Recipients with eGFR IV 15~29 and PMAS between 2 weeks and 3 months after LDLT are very high risk for mortality. SKT is an effectively life-saving remedy.



PO027 ADDRESSING HEALTH LITERACY NEEDS IN NEW KIDNEY TRANSPLANTATION PROGRAMMES IN LOW AND MIDDLE-INCOME COUNTRIES

Jewitt-Harris Jennie[1], Aimee Jewitt-Harris[2]
[1]Transplant Links; [2]Transplant Links TLC

Renal transplantation is now commonplace in developed countries and for many patients offers clear clinical and financial advantages over dialysis. The global incidence of renal failure and its risk factors such as diabetes and hypertension continue to rise, and are more prevalent in African and Caribbean communities. Many low and middle-income countries (LMICs) are establishing new kidney transplant programmes to cost-effectively improve quality of life, life expectancy and the dialysis burden on the health service. Transplant Links (TLC) is a non-profit non-government organization set up to address the skill development needed by LMICs to establish sustainable kidney transplant programmes. TLC has developed over 12 years' experience in supporting the development of kidney transplant centres in Africa, the Caribbean and Asia.

The level of health literacy related to renal failure and transplantation is generally poor in all countries, particularly those without transplant programmes. This is a significant challenge in creating a supportive political, managerial, medical and cultural landscape in LMICs planning to develop their first kidney transplant centre. The stakeholders in this process are wide-ranging and all require consideration for improving health literacy. This is critical in gaining the necessary support and understanding needed for a successful and sustainable unit. Myths and misunderstandings are still commonplace in transplantation in countries with advanced programmes, so in countries where transplantation is not part of the everyday the challenge is greater. Addressing the health literacy needs of TLC partner countries requires a range of initiatives aimed at different audiences including the media, patients and families, healthcare professionals, hospital management, and politicians.

PO029 "ALLOCATION" OF LIVER TRANSPLANTATION TO UNDERGRADUATES: INNOVATIVE PEDAGOGY OF EFFICIENT LEARNING AIMED AT FRAMWORK BUILDING

Cheng-Maw Ho, Jann-Yuan Wang, Chi-Chuan Yeh, Yao-Ming Wu, Ming-Chih Ho, Ming-Chih Ho, Rey-Heng Hu, Lee Po-Huang
National Taiwan University Hospital

Background: Physicians may consider liver transplant as a backup when prescribing medications with potential hepatotoxicity. Liver transplant recipients can have diseases in almost all discipline fields if survived. Patient management is suboptimal because of unmet needs of liver transplantation education for medical undergraduates. We aimed to illustrate an innovative pedagogy and report students' feedback.

Methods: The attendee were fifth-year medical students at the top-ranked medical school in Taiwan in the academic year 2015 and 2016. The teacher designed a 2-h course session with topics addressing indication/contraindication, organ allocation policy, malignancy, transplantation surgery, immununosuppression, and viral hepatititis, focusing on what a non-subspecialty physician should know, and key references placed online for pre-class study and in-class interactive discussion facilitated by the teacher. After class, qualitative and quantitative questionnaires were used to record learning experiences.
Results: Of the 266 attendee, 263 (98.9%) completed the questionnaires. Student feedback indicated deepened impression and highly rated satisfaction on pre-class focused guide and low-pressure learning environment in class, compared to problem-based learning and big-class lecture. Considering future confidence in management of liver transplant patients, 80 students (30.4%) showed positive response before class, and 246 (93.5%) after class, regardless of the total self-assessment scores. The extent of improvement in the topic (s) presented by attendee were not different from those in other topics.
Conclusion: Bearing in mind what a non-subspecialty physician should know, we designed the innovative pedagogy with focused topics and key references, demonstrating the groundwork for cost-effective knowledge propagation of liver transplantation management to future doctors and carrying potential application to other disciplines as well.

PO032 IDENTIFICATION OF CIRCULATING CYTOKINES/ CHEMOKINES IN HEART BEATING MULTIORGAN DONOR ACTING AS PREDICTORS OF GRAFT OUTCOMES: A PROSPECTIC COHOR STUDY

Lorenzo Piemonti[1], Valeria Sordi[1], Silvia Pellegrini[1], Giulia Maria Scotti[1], Marina Scavini[1], Viviana Sioli[2], Andrea Gianelli Castiglione[3], Massimo Cardillo[2]
[1]IRCCS Ospedale San Raffaele, Milano; [2]Fondazione Ca' Granda, Ospedale Maggiore Policlinico, Milano; [3]Azienda Ospedaliera S. Martino, Genova

Background: The inflammatory status of the heart beating multiorgan donor at the time of organ recovery can provide independent incremental prediction of graft function and survival among recipients.
Methods: To test this hypothesis from January 1, 2010 to June 30, 2012 all heart beating organ donors managed by the Nord Italia Transplant program (n = 1,100) were prospectively included in this multicentre observational study. Forty-seven cytokines/chemokines were measured on serum collected for the crossmatch. Graft survival in recipients who received kidney (n = 1,454, follow-up 4.9 years), liver (n = 911, follow-up 4.4 years) and heart (n = 264, follow-up 5 years) was evaluated.
Results: Forty-one out of forty-seven factors showed different concentrations in comparison with healthy control subjects. The intensive care unit stay, the hemodynamic instability, the cause of death, the presence of risk factors for cardiovascular disease and the presence of ongoing infection resulted as significant determinants of the cytokines/chemokine donor concentrations, even if they explained a low percentage of the variance. Donors cytokines/chemokines acting as predictor of graft survival were identified (CXCL10 among others) but with small r-squared values in regression analysis: from 4% to 6% for kidney and liver survival, and 26–38% for heart survival. None single or group of cytokines/chemokines resulted a predictor of outcome for all organs evaluated.
Conclusion: The inflammatory status of donor provides independent incremental prediction of graft survival among recipients followed according to standard clinical practice. Despite this, single or group of donor cytokines/chemokines acting as master predictor of all graft outcomes were not evident.

PO033 ADHERENCE IN YOUNG TRANSITION PATIENTS. RELATIONSHIP WITH CLINICAL OUTCOMES. PERSPECTIVE FROM ADULT HEPATOLOGISTS

Maria Trapero-Marugán[1], Fiona Thompson[2], James Ferguson[2], James Hodson[3], Bridget Gunson[4], Monica Smith[2], Philippa Lewis[2]
[1]Liver Unit, Hospital Universitario Puerta de Hierro, Universidad Autónoma de Madrid, CIBERehd, ISCIII, Madrid; [2]Liver Unit, Queen Elizabeth Hospital Birmingham, University of Birmingham, Birmingham; [3]Research and Statistics Unit, Queen Elizabeth Hospital Birmingham, University of Birmingham, Birmingham; [4]Clinical Research Unit, Queen Elizabeth Hospital Birmingham, University of Birmingham, Birmingham

Background/AIMS: To evaluate: 1) adherence in a cohort of young patients following a liver transplant (LT) in a transition clinic at a tertiary hospital. 2) the prevalence of liver rejection, graft loss and rates of regraft/death and correlate with adherence.
Methods: Retrospective study in a cohort of patients 16–26 years with LT receiving Tacrolimus (Tac) who were transferred to the transition clinic (2008–2017). A matched cohort of patients > 30 years was identified. Clinical data, blood, liver biopsy result, and clinic attendance records were obtained.

"Adherent": Tac level SD < 2 mg/ml. Statistics: SPSS version 10.0. Univariant and multivariate analysis were performed.
Results: one hundred thirty-seven patients transferred into the transition clinic; 37 were excluded as they were transplanted as adults. The remaining 100, received their first LT at a median age of 2.3 yr (IQR:1.1–8.6), and transferred at 19.3 yr (IQR:18.6–20). 30% of them had at least one Tac level recorded (median of 3 (IQR: 1–4). The Tac-SD was 1.4 mg/dl (IQR:0.6–1.8).

The median number of scheduled appointment was 4 per patient (IQR: 3–6). 53% attended all, and 24% missed multiple appointments (DNA). 41% had biopsy rejection. There was one episode of graft loss and re-transplantation in the post-transfer period. Kaplan-Meier estimated freedom from rejection rates were 97%, 95% and 89% at 1, 3, and 5 years post-transfer. Rejection rates were not significantly different in attending patients and those with DNA rates of more than 30%. Freedom from rejection at five years post-transfer was 95% and 90% respectively ($p = 0.62$).

There was no significant difference in rates of rejection between groups where the Tac-SD < 1.4 or > 1.4 ng/ml, with freedom of rejection rates of 69% and 86%, respectively, at five years post-transfer ($p = 0.56$).
Conclusion: In this cohort of young adults post liver transplant; we have shown that neither failing to attend clinic nor variability in Tac level were associated with rejection or graft-loss.

PO034 EFFECTIVENESS OF SERUM BETA-2 MICROGLOBULIN AS A TOOL TO EVALUATE KIDNEY STATUS

Gil Sung Moon[1], In Sik Shin[1], Sung Hoon Kim[2]
[1]Yonsei University Wonju College of Medicine, Wonju Severance Christian Hospital; [2]Yonsei University Wonju college of Medicine

Background: The use of expanded criteria donor (ECD) has been increased. Especially, ECD with acute kidney injury (AKI) has been also increased. However, there are no consensus tools to evaluate donor kidney status. Beta-2 microglobulin (B2MG) is known as a novel marker of kidney function in the general population. We evaluate B2MG as a marker to evaluate donor kidney status.
Material and methods: We performed 36 kidney transplantations from Mar. 2017 to Jun. 2018. We reviewed retrospectively 33 patients who had data about B2MG. All donors' blood samples were collected to evaluated cystatin C and B2MG before the transplantation.
Results: Ten patients underwent living donor kidney transplantation and 23 patients underwent deceased donor kidney transplantation. The number of ECD is each one (10%) and 15 (65.2%) in living donor and deceased donor groups. According to the AKI definition of the Kidney Disease: Improving Global Outcomes (KDIGO) group, AKI more than grade 2 was developed in 10 patients of deceased donor group. Median highest and final creatinine level of each donor were 0.78, 0.74 mg/dl and 2.3, 1.33 mg/dl. ($p < 0.001$) Serum cystatin C and B2MG were 0.77, 1.36 mg/L and 1.63, 6.47 mg/L. ($p < 0.001$). Receive operating curve analysis revealed that B2MG has only significantly predictive power for delayed graft function (DGF). Area under the curve of B2MG is 0.748 and *p*-value is 0.022. The cut-off value of B2MG is 7.48 mg/L. In the group that showed the level of B2MG more than 7.48 mg/L, the patients experienced slow graft function and DGF. However, final creatinine was similar.
Conclusion: Even though donor is ECD and had AKI and needed renal replacement therapy, the level of B2MG is less than 7.48 and then we can perform kidney transplantation without considering about discard. If the level of B2MG is more than 7.48, we may considered dual kidney transplantation or anti-thymocyte globulin as an induction agent to prevent

PO035 LIVER ALLOCATION FOR RE-TRANSPLANTATION – IMPACT OF EARLY VERSUS LATE RE-TRANSPLANTATION ON OUTCOME

Philipp Kron, Sern Yeoh, Barbara Fiore, Magdy Attia, Dhakshina Vijayanand, Shahid Farid, Ian Rowe, Rebecca Jones, J.P.A. Lodge
St James University Hospital Leeds

Background: Liver re-transplantation (LrTx) is necessary for 5–20% of recipients worldwide. Liver allocation schemes advantage recipients with very early graft failure but the opposite is true for patients needing late re-transplantation. This difference may not be justified.
Aim: The aim of this study was to assess the effect of early (≲30 days) versus late (>30 days) LrTx on 90-day mortality and longer-term survival in our centre.
Material & methods: A retrospective, single institutional analysis was performed, assessing all consecutive patients ≥ 18 years undergoing LrTx between January 2009 and December 2018.
Results: one thousand two hundred thirty-seven adult liver transplants were performed; 112 (9%) of these cases were LrTx: 98 first LrTx, 13 s LrTx and in 1 third LrTx. The three main indications for re- transplantation were: ischaemic biliopathy (25%), hepatic artery thrombosis (HAT, 23.2 %) and primary non function (PNF, 23.2 %). Early LrTx accounted for 44.6 % of cases; median 4 days (range 1–29) after the initial transplant. The 90-day mortality rate was significantly higher in in the early LrTx group at 38% compared to 11.3% for the late LrTx group, $p < 0.0008$ (Log-rank test). The main reason for the high 90-day mortality rate following early LrTx was sepsis: 53% of the cases. Analysis of 1 year overall survival demonstrated no additional mortality in the late LrTx group but there were 2 additional deaths in the early LrTx group.
Conclusion: LrTx remains the only curative option for graft failure and allocation policies have usually favoured early LrTx for PNF and HAT, granting additional priority due to urgency. This analysis suggests that for early LrTx a cautious selection of recipients is mandatory to prevent futility associated with high 90-day mortality. To the contrary, late LrTx candidates should not be disadvantaged by liver allocation policies.

PO036 ASSOCIATION OF SINGLE NUCLEOTIDE POLYMORPHISMS PNPLA3 (RS738409) A FAS (RS1800682) WITH HEPATOCELLULAR CARCINOMA IN PATIENTS TRANSPLANTED DUE TO ALCOHOLIC LIVER DISEASE

Ana Jelic[1], Tomislav Kelava[2], Dino Sisl[2], Ana Ostojic[3], Antonio Markotic[4], Slavko Gasparov[5], Danko Mikulic[3], Branislav Kocman[3], Anna Mrzljak[5]
[1]Clinical hospital Merkur; [2]School of Medicine, University of Zagreb; [3]University Hospital Merkur; [4]University Clinical Hospital Mostar; [5]University Hospital Merkur, School of Medicine, University of Zagreb

Background: alcoholic liver disease (ALD) is one of the most common indications for liver transplantation (LT). PNPLA3 polymorphism is a risk factor for ALD progression and HCC development, while Fas receptor plays role in apoptotic cell death and modulation of Fas/FasL pathway might be involved in hepatocarcinogenesis. The aim of this study was to examine the association of PNPLA3 and Fas single nucleotide polymorphisms (SNPs) with the HCC occurrence among Croatian cohort of ALD pts.
Methods: DNA was isolated from 189 ALD pts transplanted from 6/2009 to 10/2018 in the Liver Transplant center "Merkur", Zagreb, Croatia. The groups consisted of 96 pts without HCC and 93, age and sex matched, pts with histologically confirmed HCC. SNPs of PNPLA3 (rs738409) and Fas (rs1800682) were determined by polymerase chain reaction using commercially available TaqMan assays. Association between PNPLA3 or Fas polymorphism and HCC occurrence was examined in dominant, recessive, over-dominant and codominant models.
Results: Genotypes were in Hardy-Weinberg equilibrium ($p = 0.66$ for PNPLA3 and $p = 0.053$ for Fas). For PNPLA3; 33 (35.1%) non-HCC pts had CC, 49 (52.1%) CG and 12 (12.8%) GG genotype, while in HCC group there were 22 (23.7%), 41 (44.1%) and 30 (32.3%) pts with CC CG GG genotypes, respectively. We found a significant association of PNPLA3 G allele (log-additive model: OR 95%CI = 1.86 (1.22–2.83) $p = 0.003$) and GG genotype with HCC occurrence (dominant: OR 95%CI = 3.25 (1.54–6.86), $p = 0.001$ and codominant OR 95%CI = 3.75 (1.59–8.86), $p = 0.004$). Regarding Fas gene, 35 (37%) non-HCC pts had AA, 40 (42%) AG and 29 (21%) GG genotype while in HCC group 32 (34%) pts had AA, 39 (42%) AG and 22 (24%) GG genotype. Lack of association between Fas genotypes and HCC was found in all analyzed models ($p > 0.05$).
Conclusion: SNP of PNPLA3 (rs738409) is associated with increased risk of HCC occurrence, while Fas gene polymorphism (rs1800682) is not associated with greater risk of HCC in Croatian cohort.

PO038 SUCCESSFUL TREATMENT OF THE GASTROINTESTINAL MANIFESTATION OF PROTOTHECA IN A KIDNEY TRANSPLANT RECIPIENT. A CASE REPORT

Gabor Telkes[1], Katalin Dezsö[2], Attila Doros[1], Zoltan Mathe[1]
[1]Department of Transplantation and Surgery, Semmelweis University; [2]1st Department of Pathology and Experimental Cancer Research, Semmelweis University

Introduction: The Prototheca species are achlorophyllic algae, from 3 to 30 μm in diameter, and they are recognized pathogens in animals. They have been reported to cause infections in humans, the majority of the infected patients are immunocompromised. The types of the infection include skin infection, disseminated disease, algaemia, pulmonary infection, olecranon bursitis and some uncommon presentation, such as urinary tract infection, meningitis, colpitis etc. Organ transplant recipients are at risk of infection caused by such unusual organisms.
The case: Here we present a highly atypical case report of Prototheca mimicking a cecum tumor in a kidney recipient, seven years following the transplantation. Three years before this Prototheca infection, following a native nephrectomy he underwent a complicated duodeno-jejunal reconstruction with Roux-Y loop and with feeding catheter-jejunostomy. At the age 80y, positive stool test indicated colonoscopy: space occupying, tumor like lesion was discovered in the cecum, involving the Bauchin's valve and causing obstruction. The patient was treated successfully with colon resection. Detailed histology excluded malignancy and proved Prototheca wickerhamii.
Discussion: The pathogenesis as well as many biological aspects of human protothecosis are unclear. Pathogenicity and virulence are moderate, and Prototheca species are considered as rare opportunistic pathogens. Usually, treatment involves both medical (antifungal) and surgical approaches. The

surgical treatment should be complete excision. The literature suggests an extreme high mortality rate, therefore we advocate aggressive surgery in organ transplant recipients. Our case is the thirteenth reported transplant recipient with Prototheca infection, and the first gastrointestinal manifestation of protothecosis in an organ transplant recipient, treated successfully.

PO040 CONTROLLED DONATION AFTER CIRCULATORY DEATH UP TO 80 YEARS FOR LIVER TRANSPLANTATION

Felipe Alconchel[1], Pedro Antonio Cascales-Campos[1], David Ferreras[1], Ricardo Robles[1], Francisco Sánchez-Bueno[1], Antonio Ríos[1], Juan Ángel Fernández-Hernández[1], Jose Antonio Pons[1], Mario Royo-Villanova[1], Laura Martínez-Alarcón[1], Enrique Barba[1], Beatriz Febrero[1], Tatiana Nicolás[1], Pascual Parrilla[1], Pablo Ramírez[2]

[1]Hospital Clínico Universitario Virgen de la Arrixaca; [2]Hospital Clínico Universitario Virgen de la Arrixaca, IMIB

Background: Nowadays the results obtained with controlled donation after circulatory death (cDCD) are similar to those achieved with donation after brain death (DBD) in liver transplantation (LT), although in the case of cDCD there's a higher percentage of rejections of the donor during the evaluation and organ retrieval. The best results in cDCD-LT have been obtained with < 50 years donors, total warm-ischemia-times (TWIT) < 30 min and cold-ischemia-times (CIT) < 5 h. Our aim was to compare the results obtained between cDCD and DBD groups in our hospital and the influence of age on the results of cDCD over 70 years and up to 80 years.
Method: A prospective study of all cDCD-LT performed between Nov-2014 and Sept-2018. The results in terms of clinical and analytical parameters were compared with a control group, formed by DBD-LT carried out immediately after each cDCD-LT. The results obtained within the cDCD were also analyzed according to the age of the donors (cut-off 70 years). A super-rapid recovery (SRR) retrieval technique was used.
Results: Both groups were similar in terms of pre-transplant and donor characteristics. We only found statistically significant differences in the rate of biliary complications (higher in the DCD group).

	DCD > 70 (n = 30)	DCD < 70 (n = 40)	p
Hepatic artery thrombosis (HAT)	3 (10%)	2 (5%)	0.421
Retransplantation	3 (10%)	6 (15%)	0.536
Overall survival (1 year)	78%	79.8%	0.464
Graft survival (1 year)	74.6%	69.2%	0.382

Conclusion: Graft survival of the cDCD group wasn't inferior to the DBD group. However, we found a higher rate of biliary complications in the cDCD group. Age wasn´t a negative factor to cDCD success and probably, as happened with DBD, it would no longer be an exclusion criteria allowing to increase the donor pool.

PO041 INTESTINAL MICROBIOTA TRANSPLANTATION AND APPLICATION OF NEGATIVE PRESSURE WOUND THERAPY (NPWT) IN THE DEHISCENCE OF ABDOMINAL LAPAROTOMY, IN PEDIATRICS: CASE REPORT

Rossella Piedepalumbo[1], Martina di Stefano[2], Daniela Cianchi[2], Cristina Serra[2], Marina D'Agostino[2], Virginia Bove[2]

[1]Children Hospital Bambino Gesù; [2]children hospital Bambino Gesù of Rome

Background: Negative pressure wound therapy (NPWT) is widely used in adults. Its application in pediatrics is little known and studied, and literature does not help us in this sense.
Methods: In order to deepen the various fields of application of NPWT we conducted a 6-month observational study, in a 10-year-old child admitted to the Department of Hepatogastroenterology of the Bambino Gesù Pediatric Hospital in Rome, subjected to intestinal microbiota transplantation. The patient presented a dehiscence of the surgical wound following an intestinal recanalization surgery.
Results: Thanks to the experimental research conducted, it was possible to obtain results that exceeded those expected at the beginning of the project. In particular, it has proved: the utility of NPWT also in the management of abdominal dehiscences complicated by intestinal fistulization; the importance of a multidisciplinary team and the figure of the nurse specializing in Wound Care; the influence of medication pain control, to improve patient compliance.
Conclusions: This case report demonstrates the possibility of expanding the areas of use of NPWT, although pediatrics remains an open field on which to continue studying.

PO043 PERCUTANEOUS TRANSHEPATIC BILIOPLASTY WITH BIODEGRADABLE BILIARY STENTS FOR TREATMENT OF POST-LIVER TRANSPLANT BILIARY ANASTOMOTIC STRICTURES: A SINGLE CENTRE PROSPECTIVE STUDY

Marco Senzolo[1], Michele Battistel[1], Alberto Ferrarese[1], Umberto Cillo[1], Patrizia Boccagni[1], Giacomo Zanus[2], Enrico Gringeri[1], Patrizia Burra[1], Martina Gambato[1], Giacomo Germani[1], Francesco Paolo Russo[1], Giulio Barbiero[1], Sarah Shalaby[3]

[1]Padua University Hospital; [2]Treviso Hospital; [3]Padua University Hospital Italy

Background: Biliary Anastomotic Strictures (AS) represent a major problem in the post-liver transplant (LT) setting. **Aim**: to evaluate the outcome of patients treated with percutaneous transhepatic biliary cholangiography (PTC) plus balloon dilatation for AS and with placement of Biodegradable Biliary Stents (BBS) for PTC-refractory AS.
Materials and Methods: All adult LT recipients who developed a clinically significant AS between 01.2014 and 06.2017 were prospectively enrolled. PTC plus balloon dilatation procedure was performed as first therapeutic approach and repeated monthly until AS resolution. Refractory AS (diagnosed after two ineffective PTC plus balloon dilatation procedures) were treated with Poly-dioxanone-made BBS (Ella-DV biliary stent, Czech Republic).
Results: AS occurred in 43 patients (M/F 30/13, median age 57.4 [28–72] years, median MELD at LT 18 [7–30]) at a median time of 6 [4–25] months after LT. After repeated PTC plus balloon dilatation procedures, complete resolution of AS was achieved in 26/44 (59%) patients. 18/43 (41.8%) developed a refractory AS, treated with choledochojejunostomy in 3/18 (16.6%). The remaining 15 patients (M/F 12/3) underwent BBS placement, at a median interval time from LT of 15 [4–80] months. All procedures but one (bilio-cutaneous fistula) were uneventful. After a median follow-up time of 16.5 [6–38] months, complete resolution of AS was achieved in 86.6% of patients, with a significant improvement in transaminases (ALT: 72[129] vs.23 [16] U/L, p = 0.001), and cholestasis (ALP: 215[182] vs.138 [131] U/L; p = 0.02; bilirubin: 21[52] vs.9[7] umol/L, p = 0.04).
Conclusion: In liver transplant recipients with PTC-refractory AS, Biodegradable Biliary Stents should be an effective therapeutic option.

PO045 RECIPIENT-DEPENDENT PREDICTORS OF A KIDNEY GRAFT FUNCTIONAL SURVIVAL IN THE LONG-TERM FOLLOW-UP: A SINGLE-CENTER EXPERIENCE

Ihor Rusanov[1], Andrew Nykonenko[2], Serhii Machuskyi[2], Serhii Vildanov[2], Dmitro Buga[1]

[1]State Institution "Zaporizhia Medical Academy of Post-Graduate Education Ministry of Health of Ukraine"; [2]Zaporizhzhia State Medical University

Background: One of the main problems after kidney transplantation in the long term is the rejection reaction. Identifying recipient-dependent non-immunological factors that increase the risk of kidney graft function loss is an important task.
Methods/Materials: The purpose of this study was a retrospective analysis of clinical factors affecting the long-term kidney graft survival. 84 patients were selected who underwent kidney transplantation for the period from 1992 to 2008 in the single center in Ukraine. A number of recipient-dependent factors were evaluated, such as demographic, primary and related diagnoses, complications in the late postoperative period, basic patterns and conversion of immunosuppression, and other ones. For statistical analysis, Pearson Chi-square and Mann-Whitney U-criteria were used.
Results: The mean follow-up was 7.36 ± 5.76 years. Among the observed recipients, the 1-year survival of kidney graft was 98.8%, 3-years — 91.54%, 5-years — 85, 96%, 8-years — 76.08%, 10-years — 67.6%. There were two major statistically and clinically significant factors affecting the long-term survival of a kidney grafts. Firstly, the pattern of immunosuppressive therapy had a significant impact on the 5, 8 and 10-year graft survival, since in the group receiving the Cyclosporine, Azathioprine, Prednisolone regimen there was not a single case of transplant rejection compared with the Cyclosporine, Mycophenolic Acid, Prednisolone one (p = 0.0543/0.017/0.0155, respectively). Secondly, late infectious complications, such as bacterial or fungal sepsis and repeated episodes of graft pyelonephritis (p = 0.035), had an important role in the long-term period (10 years after transplantation).
Conclusion: The most significant factors affecting graft survival in the long term were the immunosuppressive therapy pattern and presence of late infectious complications. Further research is needed to develop a rejection risk scale based on these factors.

PO046 A KIDNEY TRANSPLANT RECIPIENT WITH SEVERE ACUTE GVHD PROMPTLY RESCUED BY PLASMA-TRANSFUSION-MEDIATED DONOR HLA-TARGETED SEROTHERAPY

Julien Zuber[1], Olivia Boyer[2], Bénédicte Neven[2], Isabelle Jollet[3], Virginie Renac[3], France Pirenne[3], Sylvie Gross[3], Rachid Djoudi[3], Pierre Tiberghien[3], Jean Luc Taupin[4], Stephane Blanche[1], Rémi Salomon[1]
[1]Necker; [2]Necker Hospital; [3]French Blood Service; [4]St Louis Hospital

Background: Acute Graft-versus-Host Disease (GvHD) is a rare but frequently lethal complication after solid organ transplantation (SOT). GvHD occurs in unduly immunocompromised recipients, yet requires immunosuppression escalation, thus increasing the risk of fatal sepsis. We hypothesized that transfusion of plasma with high levels of antibodies targeting at least one donor mismatched HLA antigen, could control GvHD in such setting.
Methods: We faced a therapeutic dead-end in an immune-deficient child with severe steroid-resistant GvHD after a kidney transplantation, associated with a high donor chimerism in circulating T cells. A large subset of donor T cells was bound to recipient microvesicles. An urgent nationwide search among 3,800 registered blood donors with known anti-HLA immunization was coordinated by the French National Blood Service and identified 3 donors accordingly immunized.
Results: The patient received 200 ml of plasma #1 and plasma#2, three days apart. Rapid DSA adsorption on donor cells was supported by rapid drop in MFI post-infusion. Plasma transfusions were remarkably well tolerated, with no discernable kidney allograft toxicity. The patient had been experiencing severe neutropenia (<0.5 G/L) and major hyperbilirubinemia (>10 mg/dl) for 15 and 6 days, respectively. The day following the infusion, white cell count rose sharply, meanwhile the bilirubin dropped. At day6 post-infusion, the neutrophil count peaked at 4.4 G/L, while total bilirubin decreased to 3.8 mg/dl. Within a week, the general status dramatically improved. Diarrhea completely and durably resolved. Steroids doses were progressively tapered down. Strikingly, donor activated T cells bound to recipient microvesicles sharply decreased as early as 3 days after the first plasma infusion.
Conclusions: An innovative immunotherapy strategy, coined donor-targeted serotherapy, based on the transfer of anti-HLA DSA, can successfully rescue a life-threatening refractory SOT-associated GvHD.

PO047 CIDOFOVIR FOR BK NEPHROPATHY RESCUE TREATMENT: A SINGLE CENTER EXPERIENCE

Janka Slatinska, Tomas Rohal, Eva Honsova, Antonij Slavcev, Petra Hruba, Ondrej Viklicky
IKEM Prague

Introduction and Aims: Cidofovir is a potentially nephrotoxic antiviral drug used primarily as a treatment for CMV retinitis however due to its potent antiviral effects has been suggested also for polyoma BK virus nephropathy (BKVN) treatment, however clinical experience remains anecdotal.
Methods: In this retrospective cohort study we analysed the efficacy and safety of administration of cidofovir in the treatment of BKVN after kidney transplantation. The diagnosis was confirmed by histology and/or quantitative nucleic acid test (BKV PCR). 24 patients received cidofovir for BKVN treatment in 2003–2017 when other measures (18x switch from tacrolimus to CsA, 6x reduction of the current immunosuppression) had failed in terms of deterioration of graft function, progression of morphological changes and BKV replication. Cidofovir (0.22–0.33 mg/kg) was given biweekly five times. Patients were followed for a minimum of 12 months.
Results: Diagnosis of BKVN was made at median of 3 months (2.5–43) after kidney transplantation, with median donor age 53 years, median age of recipients 51.5 years, 58.3 % were males, median peak PRA 16 %, current PRA 8%, mean HLA mismatch in HLA-A 1 $\pm$ 0.7, HLA-B 1.5 $\pm$ 0.6, HLA-C 1.2 $\pm$ 0.6, 16 % had CMV mismatch, CIT was 13.5 $\pm$ 6 h, with median of 2.4 years on dialysis. All patients had received triple immunosuppression based on tacrolimus, mycophenolate mofetil and corticosteroids, rATG was given as induction regimen to 12 patients. 7 out of 24 patients experienced simultaneous BKVN and acute rejection findings in histology.

Graft function before and 12 months after cidofovir treatment was similar (creatinine 197.2 μmol/l vs. 212 μmol/l, $p = n.s.$). We did not observe a single case of acute nephrotoxicity. BKV replication decreased significantly at 3 and 12 months after the treatment, $p < 0.0001$). We did not observe any graft failure due to nephrotoxic effect of cidofovir. We did not confirm any adverse events after the treatment with cidofovir.

PO048 TWO CASES OF SALVAGE LIVER TRANSPLANTATION FOR THE HCC PRESENTED INITIAL ADVANCED STAGE BEYOND UCSF CRITERIA AND SHOWN GOOD PROGNOSIS

Koo Jeong Kang, Tae-Seok Kim, Keun Soo Ahn, Yong Hoon Kim, Jeong Woo Lee, Hyoung Tae Kim
Keimyung University Dong-San Hospital

A 46-year-old male patient who has chronic hepatitis B carrier were developed a 6 cm-sized tumor in left lateral section with tumor thrombus in left portal vein and elevated α-FP and PIVKA II level. He underwent left hepatectomy with tumor thrombectomy and pathologic report showed moderately differentiated HCC invaded to portal vein and bile duct. Four months after surgery, a metastatic nodule appeared in the gastrohepatic ligament, and that was ablated with percutaneous ethanol injection. Two years after surgery, two metastatic pulmonary nodules appeared and were removed by wedge resection. He had stable liver function and no recurrence or metastasis until 9 years after surgery. However, the liver was decompensated cirrhosis with intractable ascites without HCC recurrence for the late 2 years. So, living donor liver transplantation was performed at eleven and half years after initial hepatectomy. The patient recovered completely without any complication after LDLT and has been received of immunosuppression with combination of low dose tacrolimus and everolimus. This patient has been doing well his works without tumor recurrence with normal liver function until one and half year after liver transplantation.

A 56-year old male patient who has chronic hepatitis B carrier developed 10 cm sized HCC in his hepatic segment 5–6 combined with portal vein tumor thrombosis. The patient was undergone right hemihepatectomy. The pathology showed moderately differentiated HCC with partial infiltrating type and portal vein tumor thrombosis in the hepatic segment 5&6. Multiple intrahepatic metastasis was developed in the remnant left liver including caudate lobe 4 months after surgical resection. The patient underwent TACE followed by living donor liver transplantation 6 months after initial resection. The patient received immunosuppression with low dose prograf and everolimus daily, keeping trough level of prograf 2–3 ng/ml and everolimus 4–5 ng/ml. There was no evidence of recurrence

PO049 PROTECTIVE MECHANISM OF HEME OXYGENASE-1 ON MPA INDUCED APOPTOSIS HUMAN JURKAT CELLS

Sola Lee, Soo Jin Na Choi, Sang Young Chung
Chonnam National University Hospital

Purpose: Heme oxygenase-1 (HO-1) is a rate-limiting enzyme of heme catabolism. However, the role of HO-1 in the immunosuppresive response system remains elusive. This study demonstrates that pharmacologic induction of HO-1 along with catalytic activation significantly modulated apoptosis of Jurkat cells induced by mycophenolic acid (MPA).
Method: Cell viability, reactive oxygen species (ROS) generation, and mitochondrial membrane potential transition (MPT) change were measured by flow cytometry. Western blottings of HO-1, Bcl-2, and Bax were also performed.
Results: MPA decreased the viability of Jurkat cells in dose and time dependant manners by the apoptotic nuclear fragmentation. 20 μM cobalt protoporphyrin (CoPPIX; HO-1 inducer) significantly increased HO-1 expression in MPA treated cells. Apoptosis rate is 3.53% in media only, 23% in MPA treated cells, 5.8% in MPA treated cells with CoPPIX. The cell viability was reduced 77 % under MPA, but combination with CoPPIX, there was no increased MPA induced apoptosis. CoPPIX inhibited generation of ROS in MPA treated Jurkat cells. CoPPIX protected MPA induced MPT change in Jurkat cells. Induction of HO-1 decreased expression of Bax protein.
Conclusion: This result suggests that induction of HO-1 by CoPPIX ptrotects against MPA induced apoptosis is associated with direct inhibition of ROS generation and protection of MPT loss via inhibition of Bax protein.

PO050 RISK FACTORS FOR PRIMARY POOR FUNCTION IN LIVER TRANSPLANTATION: A RETROSPECTIVE SINGLE CENTRE ANALYSIS

Margot Fodor[1], Adriana Woerdehoff[1], Janette Walde[2], Sabrina Neururer[1], Hannah Esser[1], Christian Margreiter[1], Manuel Maglione[1], Rupert Oberhuber[1], Benno Cardini[1], Heinz Zoller[1], Herbert Tilg[1], Dietmar Oefner[1], Stefan Schneeberger[1]
[1]Medical University of Innsbruck; [2]University of Innsbruck

Background: Primary poor function (PPF) complicates liver transplantation and results in poor outcomes. Recipients who develop PPF, experience longer hospital stay, higher mortality and graft loss rates. The aim of this analysis was to assess PPF as an intermediate outcome measure in a large single centre cohort and to correlate PPF with donor, recipient and peri-operative risk factors.

Methods: PPF was defined as the presence of one or more of previously defined postoperative laboratory analyses: bilirubin ≥ 10 mg/dl on day 7; international normalized ratio ≥ 1.6 on day 7, aspartate aminotransferases > 2,000 IU/L on day 1–7; PPF was assessed in a cohort of 767 liver transplants performed between 2007 and 2018. The effect of PPF on recipient and graft survival was analysed and risk factors for PPF were assessed using multivariate analyses and the Kaplan-Meyer method.
Results: The incidence of PPF was 31.3%. 1-, 3-, 5-year graft and patient survival were worse in patients with PPF than in those without ($p < 0.01$ at all time points). Multivariate analysis showed associations between PPF and re-transplantation, recipient hepatitis-C-positive status, ($p < 0.05$), recipient graft Child Score ($p < 0.01$), cold ischemia time ($p < 0.05$), anastomosis time, post-operative hematoma ($p < 0.01$), donor BMI, donor graft steatosis, donor GGT ($p < 0.01$). Patients with PPF had a significantly longer hospitalisation (30.8 ± 23.3 days compared to 26.5 ± 19.8 days, $p < 0.01$).
Conclusion: Recipient-, surgery- and donor-related factors have been associated with PPF. The combination of such risk factors poses a significant for PPF and should be avoided.

PO052 CYTOMEGALOVIRUS (CMV) INFECTION INDUCES AN ANGIOGENIC RESPONSE THROUGH HEPATIC STELLATE CELLS (HSCS) AND LEADS TO EARLY POST-TRANSPLANT LIVER FIBROSIS (LF) AND POOR GRAFT SURVIVAL

B. Handan Ozdemir[1], Gonca Ozgun[1], Ebru H. Ayvazoglu Soy[2], Nihan Haberal[1], Gokhan Moray[2], Mehmet Haberal[2]
[1]the Department of Pathology, Faculty of Medicine, Baskent University, Ankara; [2]the Department of Transplantation, Faculty of Medicine, Baskent University, Ankara

Background: The ability of the CMV to infect the endothelial cells (ECs) is critical. CMV can increase EC adhesion, permeability, and create a pro-inflammatory environment that can promote angiogenesis. This study aimed to show both the direct and indirect effects of CMV on the development of LF.
Methods: CMV positive 24 patients (Group 1) and CMV negative 45 patients (Group 2) were included in the study. Number of AR episodes were recorded. All biopsies were scored and immunostained with α-SMA, TNF-α, TGF-β, and CD31. Activated HSCs determined by the expression of α-SMA and angiogenes was highlighted with CD31. The development of LF during 18 months was evaluated in follow-up biopsies.
Results: The mean number of AR episodes were higher in Group 1 (1.45 ± 1.2) compared to Group 2 (0.55 ± 0.7) ($p = 0.001$). The degree of HSC activation, angiogenesis, liver TGF-β and TNF-α expression were higher in Group 1 compared to Group 2 ($p < 0.001$). The degree of angiogenesis showed a positive correlation with the degree of leukocyte infiltration, HSC activation, liver TGF-β and TNF-α expression ($p < 0.001$). LF was found to be higher in Group 1 (87.5%) compared to Group 2 (33.1%) ($p < 0.001$). Also, a significant relationship was found between the groups in regards to the fibrosis score ($p < 0.01$). LF showed a positive correlation with the degree of leukocyte infiltration, angiogenesis, HSC activation, liver TGF-β and TNF-α expression ($p < 0.001$). Overall 10-year graft survival was 91% and 67% for CMV negative and positive patients, respectively ($p = 0.008$).
Conclusion: We showed that CMV infection plays multiple roles on the induction of angiogenesis and therefore the development of LF. CMV increases the incidence of AR episodes characterized by inflammation, and EC activation which in turn leads to both the development of HSC activation and progressive cytokine and growth factor expression with proangiogenic action that stimulates angiogenesis.

PO053 THE PROGRESSION OF DIABETIC NEPHROPATHY AFTER SUCCESSFUL PANCREAS TRANSPLANTATION ALONE: A CASE REPORT

Kwan tae Park[1], Seulgi Hyun[1], Byoung Hyun Choi[2], Khaliun Ganbold[1]
[1]Mongolian National university of medical Sciences; [2]Yansan Busan National university Hospital

This case indicates the fact that the diabetic nephropathy can be aggravated even after well-managed glucose control and without CNI toxicity after pancreas transplantation.

However, the amount of proteinuria fluctuated. The kidney needle biopsy was performed for severe elevation of proteinuria two years after the transplantation. Pathologic findings including electromicroscope revealed diabetic glomerulosclerosis without evidence of CNI toxicity.

A 22-year-old female who had type I diabetes underwent pancreatic transplantation alone. The patient already had retinopathy, and mild proteinuria which, in this case, may mean diabetic nephropathy. Her glucose level has been managed within normal range after successful pancreas transplantation.

The pancreas transplantation is considered as the only near-cure option for treatment of insulin-dependent diabetes. However, the effect of pancreas transplantation for patients with diabetic nephropathy is recently being thought controversial. We have experienced a case of abrupt aggravation of proteinuria after successful pancreas transplantation alone without evidence of calcineurin inhibitor (CNI) toxicity.

PO054 SOLVING ORGAN SHORTAGE: IS IT ONLY A FINANCIAL ISSUE

Stephan Antoine
National Organization for organ and Tissue Donation and Transplantation NOD-Lb

We feel that the improvements in the well-being, rehabilitation and gain in life expectancy justify the efforts spent to try and solve organ shortage. The benefit goes way beyond the financial issue.

If our main purpose is to save money for the third party payer, while offering the most adequate treatment, we should logically encourage or at least stop discouraging living donation. A modality that is definitely cheaper and more successful than transplantation from a deceased donor.

The introduction of new immunosuppressors to improve the outcome or to salvage failing grafts has led to significant expenses that could eliminate the financial advantages initially claimed.

Now, that transplantation has been extended to include less than ideal donors and recipient pairs is the financial argument still valid.

With time a race to get the best donor's rate made us forget our initial aim: Treating patients.

One of the very first arguments used to convince governments and insurance companies to invest in the promotion of organ transplantation (mostly kidney transplantation) was a financial argument: in the long run transplantation saves money.

PO055 UTILITY OF LIQUID BIOPSY (CTCS), MATRIX METALLOPROTEINASE-1 (MMP-1) AND ASIALOGLYCOPROTEIN RECEPTOR 1 (ASGR1) AS A PROGNOSTIC BIOMARKERS AFTER LIVER TRANSPLANTATION (LT) IN CIRRHOTIC PATIENTS WITH HEPATOCARCINOMA (HCC)

Felipe Alconchel[1], David Ferreras[1], Pedro Antonio Cascales-Campos[1], Luis Sáenz-Mateos[2], Francisco Villalba[2], Isabel Sánchez-Lorencio[2], Beatriz Medievo[1], Juan Ángel Fernández-Hernández[1], Antonio Ríos[1], Jose Manuel Rodríguez[1], Jose Antonio Pons[1], Ricardo Robles[1], Francisco Sánchez-Bueno[1], Mario Royo-Villanova[1], Laura Martínez[1], Enrique Barba[1], Beatriz Febrero[3], Tatiana Nicolás[4], Pascual Parrilla[1], Pablo Ramírez[1]
[1]Hospital Clínico Universitario Virgen de la Arrixaca, IMIB-Virgen de la Arrixaca; [2]Complejo Hospitalario de Navarra; [3]Hospital Clínico Universitario Virgen de la Arrixaca Spain; [4]Hospital Clínico Universitario Virgen de la Arrixaca

Background: New markers associated with angiogenesis and tumor metastasis, such as circulating tumor cells (CTCs), are opening up new avenues in cancer management from the laboratory. The Aim of this work is to determine the number of CTCs and MMP-1 and ASGR1 expression in patients included in waiting list for LT with HCC and to study its possible association with the AFP marker and with clinical variables.
Method: Peripheral blood of 36 patients suffering hHCC once included in waiting list for LT was obtained. 29 of them were transplanted, 27 of whom had blood extracted one month after the transplant, 19 of them after 6 months and one year after the transplant and 11 of them two years after the transplant.
Results: A statistically significant positive correlation was found between the pre-transplant levels of CTCs and the days on waiting list. The CTCs were not correlated in a significant way with the AFP concentration, number of tumors and time since diagnosis. Out of the 29 transplanted patients, 2 showed vascular invasion in liver. Differences in the levels of CTCs were found between the patients with and without vascular invasion.
Conclusion: The levels of CTCs and MMP-1 expression could be an unfavourable prognostic factor associated to longer waiting times and to the presence of vascular invasion with an increased risk of relapse and post-transplant metastasis. The expression of ASGR1 after LT decreases coinciding with the absence of post-LT tumor disease. In addition, we can see how their levels decrease significantly after transplantation. It would be necessary to increase the number of patients in the study, as well as the follow-up time, in order to achieve greater clinical evidence for its utility.

PO056 CONTROLLING NUTRITIONAL STATUS (CONUT) SCORE DOES NOT PREDICT PATIENTS OVERALL SURVIVAL OR HEPATOCELLULAR CARCINOMA (HCC) RECURRENCE AFTER DECEASED DONOR LIVER TRANSPLANTATION

Riccardo Pravisani[1], Umberto Baccarani[2], Federico Mocchegiani[3], Miriam Isola[4], Dario Lorenzin[2], Gian Luigi Adani[2], Vittorio Cherchi[2], Giovanni Terrosu[2], Marco Vivarelli[3], Andrea Risaliti[2]

[1]University of Udine; [2]Liver-Kidney Transplant Unit, Department of Medicine, University of Udine; [3]HPB Surgery and Transplantation Unit - Department of Clinical and Experimental Medicine, Polytechnic University of Marche; [4]Division of Medical Statistics, Department of Medicine, University of Udine

Background: The Controlling Nutritional Status (CONUT) score is a newly developed laboratory-derived immuno-nutritional score which has been validated as prognostic marker for survival and tumor recurrence in surgically treated patients with many tumor types, including hepatocellular carcinoma (HCC). The aim of the present study was to test CONUT score in HCC patients submitted to liver transplantation (LT)
Methods: retrospective study on a bi-centers cohort of 280 HCC patients submitted to LT between 2006 and 2017. Indication to LT was limited to Milan criteria or UCSF criteria, according to preoperative imaging.
Results: The median pre-LT CONUT score was 5 [3–7]. The overall patient survival at 1, 3, 5 years was 84%, 76.6% and 68.3%, respectively. In multivariate analysis, HCC recurrence (hazard ratio (HR) = 1.987, $p = 0.012$) and pre-LT Neutrophil-to-Lymphocyte Ratio (NLR) (HR = 1.064, $p = 0.003$) resulted independent risk factors for poor survival. The cumulative incidence of HCC recurrence at 1, 3, 5 years was 5.1%, 11.5% and 15.5%, respectively. In multivariate analysis, Pre-LT Platelet-to-Lymphocyte Ratio (PLR) (subdistribution hazard ratio (SHR) = 1.086, $p = 0.044$), tumor max diameter (SHR = 1.695, $p < 0.001$) and bilobar tumor distribution (SHR = 6.892, $p = 0.006$) resulted independent risk factors for tumor recurrence. CONUT score did not show any prognostic value.
Conclusions: differently from HCC patients submitted to hepatic resection, in LT recipients CONUT score does not predict poor survival or tumor recurrence.

PO057 ABO-INCOMPATIBLE RENAL TRANSPLANTATION AS A RETRANSPLANT

Junji Uchida[1], Akihiro Kosoku[1], Tomoaki Iwai[1], Shunji Nishide[1], Hisao Shimada[1], Kazuya Kabei[1], Toshihide Naganuma[1], Yuki Yoshikawa[2], Keiko Maeda[2], Norihiko Kumada[3], Yoshiaki Takemoto[1], Tatsuya Nakatani[1]

[1]Osaka City University Graduate School of Medicine; [2]Osaka City University Hospital; [3]Suita Municipal Hospital

Introduction: Despite advances in immunosuppressant medications and management of transplant recipients, improvement in long-term survival for renal transplant recipients has been more difficult to achieve. In fact, the number of patients with failing grafts who must either return to dialysis or undergo a retransplant is increasing. Retransplantation is associated with reduced mortality rates compared to remaining on dialysis after an initial graft loss. Nowadays, excellent ABO-incompatible renal transplant outcomes have been achieved. However, there have been no reports on ABO-incompatible renal transplantation as a retransplant.
Patients and Methods: Three patients received their graft from an ABO-incompatible living donor at our institution as a retransplant. We focused on immunosuppressive therapy for ABO-incompatible renal retransplantation, donor specific antibody status before the retransplant, patient and graft survivals, and complications.
Results: All three patients successfully underwent ABO-incompatible renal transplantation as a retransplant with a follow-up period of 141 months, 39 months, and 24 months. Patient and graft survival rates were 100%.
Conclusion: ABO-incompatible renal transplantation may be an optional treatment for patients who need a second renal replacement therapy after their initial graft failure.

PO058 MELTDOSE® TECHNOLOGY VERSUS ONCE-DAILY PROLONGED RELEASE TACROLIMUS IN DE NOVO LIVER TRANSPLANT RECIPIENTS

Umberto Baccarani[1], Riccardo Pravisani[2], Dario Lorenzin[1], Gian Luigi Adani[1], Vittorio Cherchi[1], Jaqueline Velkoski[1], Bruno Falzone[3], Massimo Baraldo[3], Andrea Risaliti[1]

[1]Liver-Kidney Transplant Unit, Department of Medicine, University of Udine; [2]University of Udine; [3]Institute of Clinical Pharmacology, Department of Medicine, University of Udine

Background: an extended-release tacrolimus (LCP-TAC) is a new tacrolimus formulation developed with MeltDose® technology and designed for once-daily administration. MeltDose® is a drug delivery technology used to increase the oral bioavailability, compared to tacrolimus prolonged release formulation (TAC-PR).The aim of the study was to retrospectively compare de novo administration of LCP-TAC and TAC-PR in terms of therapeutic trough levels and daily/dosage during the first 30 days after first liver transplantation (LT).
Methods: Thirty-five patients submitted to first liver transplant between 2016 and 2018 were retrospectively enrolled, 16 received LCP-TAC while 19 TAC-PR as de novo immunosuppression. Patients were analyzed for daily dosage and trough levels at POD 3, 7, 15 and 30.
Results: the initial dose of tacrolimus did not differ between LCP-TAC and TAC-PR (5.19 ± 1.72 mg/day vs.5.26 ± 1.91, $p = 0.90$). On POD 7, 15 and 30 the daily dosage was statistically lower for LCP-TAC compared to TAC-PR, respectively 5.44 ± 2.06 mg/day versus 7.68 ± 2.91 ($p = 0.01$), 5.33 ± 2.23 mg/day versus 8.82 ± 2.35 ($p < 0.001$) and 5.38 ± 2.50 mg/day versus 9.81 ± 3.78 ($p < 0.001$). The therapeutic trough levels were significantly higher for LCP-TAC on POD 3 (5.05 ± 3.58 ng/ml vs. 2.42 ± 2.75, $p = 0.032$) and POD 5 (7.35 ± 5.12 ng/ml vs. 4.17 ± 2.05 ($p = 0.037$), while no differences were found on POD 7, 15 and 30.The percentage of patients on POD 3 achieving a trough level higher than 6 ng/ml was higher for LCP-TAC than TAC-PR (40% vs. 13%, $p = 0.05$).
Conclusions: LCP-TAC after LT is safe and might enhance bioavailability reducing the amount of drug necessary to achieve therapeutic trough levels compared to TAC-PR.

PO059 OUTCOMES FOLLOWING LIVING DONOR KIDNEY TRANSPLANTATION IN PATIENTS WITH DONOR-SPECIFIC HLA ANTIBODIES AFTER DESENSITIZATION WITH IMMUNOADSORPTION

Florian Kälble[1], Claudius Speer[1], Luiza Pego da Silva[1], Christian Nußhag[1], Matthias Schaier[1], Martin Zeier[1], Arianeb Mehrabi[2], Caner Süsal[3], Christian Morath[1]

[1]Nephrology Unit, University Hospital Heidelberg; [2]Department of General, Visceral and Transplantation Surgery, University Hospital Heidelberg; [3]Department of Transplantation Immunology, University Hospital Heidelberg

Due to the current organ shortage, living donor kidney transplantation is increasingly performed over human leukocyte antigen (HLA) barrier. Uncertainty still exists concerning the risk for antibody-mediated rejection episodes, possibly limiting long-term graft survival. The present study aimed to evaluate the outcomes of kidney transplantations performed after desensitization in patients with donor-specific HLA antibodies compared to standard risk recipients.

Thirty-eight sensitized patients were included in the study. Sixteen patients had a positive CDC and/or ELISA crossmatch result with their prospective living donor and 32 patients had Luminex-detected donor-specific HLA antibodies (DSA). Patients were successfully desensitized by immunoadsorption treatment (median of 8 treatments) and anti-CD20 antibody rituximab (N = 36) combined with antithymocyte globulin (N = 20) or anti-IL2 receptor antibody therapy (N = 18). Twelve patients were additionally treated by plasmapheresis. All patients received a kidney transplant from a living donor. Postoperative apheresis was performed in 28 patients. The outcomes of the 38 patients were retrospectively compared to outcomes of 76 standard risk recipients (2:1 matching).

During a median of 8 pretransplant immunoadsorption treatments, IgG was reduced by 98% and IgM by 78% in sensitized patients. After transplantation, sensitized patients showed comparable death-censored graft survival and patient survival compared to standard risk recipients. Infectious complications, surgical complications and rejection rates (18% in both groups) were not significantly different between groups. Median 1-year serum creatinine was with 1.31 mg/dl in sensitized recipients not significantly different to the 1.38 mg/dl in standard risk recipients.

Our desensitization protocol for sensitized living donor kidney transplant recipients results in good graft outcomes with comparable side effects and rejections rates to standard risk recipients.

PO061 AWARENESS OF ORGAN DONATION IN TWO OPPOSITE POPULATION FROM A SOCIAL POINT OF VIEW IN AWAITING ROOMS OF GENERAL PHYSICIANS

Julien Rogier

Fédération de transplantation CHU de Bordeaux

Introduction: In France, a fundamental principle governs the donation of human organ and tissues: presumed consent. If an individual is opposed to donating their organs, they need to formally record their refusal whilst alive. This founding principle has been reinforced by a decree passed on August 16th, 2016. In order for the public at large to be informed of such principles l'agence de la biomedicine produces explanatory brochures, yet these are generally not available at physicians' offices. The goal of this study was to assess whether the availability of such brochures in doctors' waiting rooms spurs patients' interest and whether this varies depending on the socio-economic background of patients.

Material and methods: Two areas of Bordeaux with different socio-economic profiles were chosen as the sample areas for the study. Brochures published by l'agence de la biomedicine were made available to patients in doctors' offices for a month in these areas, after which the remaining brochures were counted.
Results: Patients from 17 practices were included in the study. A total of 163 brochures were picked up by patients through the study period. 3.59% of patients of higher socio-economic backgrounds picked up the brochure compared to just 0.83% of patients of lower socio-economic backgrounds. There is a significant difference in the results collected for the two groups (observed statistics of 46.96 with a p value of 7.24*10–12, hence lower than 0.05).
Discussion: The brochure is an effective means of raising awareness amongst people from higher socio-economic backgrounds but appears less effective for lower socio-economic backgrounds. This study needs to be

PO062 UTILIZATION OF NORMOTHERMIC MACHINE PERFUSION IN THE SURGICALLY COMPLEX LIVER TRANSPLANT RECIPIENT: OWN EXPIRIENCE

Benno Cardini[1], Rupert Oberhuber[1], Theresa Hautz[1], Valeria Berchtold[1], Silvia Gasteiger[1], Manuel Maglione[1], Christian Margreiter[1], Thomas Resch[1], Stefan Scheidl[1], Claudia Bösmüller[1], Harald Mair[1], Marion Frank[1], Florian Augustin[1], Werner Pajik[2], Robert Breitkopf [2], Dietmar Öfner-Velano[1], Annemarie Weißenbacher[1], Stefan Schneeberger[1]
[1]Department of Visceral Transplant and Thoracic Surgery, Medical University of Innsbruck; [2]Department of Anaesthesiology and Critical Care Medicine, Medical University of Innsbruck

Introduction: Increasingly common indications for normothermic machine perfusion (NMP) are extended criteria donors, prolonged preservation and logistics. We herein present a case, were NMP was applied to facilitate liver transplantation in a surgically very high-risk recipient.
Methods: A 34 years old patient was referred to our center with grade IV portal vein thrombosis and refractory massive gastrointestinal bleedings from a varix at the cholecystojejunostomy performed in his childhood due to biliary atresia. The patient was accepted for a high-urgency liver-transplant since the bleedings (33 red-packed cells/24 h) were neither interventionally nor surgically controllable.
Results: After a liver graft was accepted, NMP was initiated since portal vein reconstruction was expected to be time consuming and complicated and a rescue option for the liver was deemed necessary in case transplantation was not possible. A paragastric varix was carefully dissected out for portal revascularization. Both perfusion parameters as well as function were uneventful during the NMP period.The surgical procedure was performed under stress-free conditions. Hepatectomy time was 7 h 35 min, anastomosis time 48 min and total duration of the procedure was 12 h 17 min. Total preservation-time was 12 h 36 min (6 h 42 min CIT, 5 h 52 min NMP). The intraoperative course was uneventful without hemodynamic problems or signs of post-reperfusion syndrome. Initial liver function was excellent. GI-bleedings did not reoccur. An infection of unknown focus was successfully treated with antibiotics and the patient was discharged in good clinical condition on day 22.
Conclusion: NMP can be essential in surgically complex cases and provide a lifeboat option for the liver in cases where a patient is in such a complex condition that successful completion of the hepatectomy is uncertain.

PO063 NORMOTHERMIC PERFUSION OF AN EX SITU RIGHT EXTENDED LIVER SPLIT: A CASE REPORT

Benno Cardini[1], Rupert Oberhuber[1], Valeria Berchtold[1], Silvia Gasteiger[1], Manuel Maglione[1], Christian Margreiter[1], Thomas Resch[1], Stefan Scheidl[1], Claudia Bösmüller[1], Florian Augustin[1], Werner Pajik[2], Robert Breitkopf[2], Dietmar Öfner-Velano[1], Annemarie Weissenbacher[1], Stefan Schneeberger[1]
[1]Department of Visceral Transplant and Thoracic Surgery, Medical University of Innsbruck; [2]Department of Anaesthesiology and Critical Care Medicine, Medical University of Innsbruck

Introduction: Normothermic machine perfusion (NMP) shows great promise to prolong and improve liver preservation. We herein present the first case of NMP and subsequent transplantation in an ex-situ right-extended liver split graft.
Methods: A back-table ex situ liver split was performed in a liver from a 42-year-old donor. The left lateral split was assigned for liver retransplantation to a 4 month old boy with multiple anatomical variations. Since the extended right liver grafts had been allocated to an equally surgically complex 50 years old recipient for retransplantation, simultaneous surgery was deemed impossible with respect to resources and qualified staff. To prepare the right extended graft for NMP, the dissection plane was closed with a running absorbable suture prior to initiating NMP (OrganOx metra®).
b Perfusion parameters were within normal limits over the entire observation period. Lactate levels decreased from 105 mg/dl to 8 mg/dl over 11 h and 43 min, pH-value remained within physiological range after infusion of 10 ml sodium bicarbonate. After 713 min of NMP time and a total preservation time of 1,250 min (537 min CIT) the graft was reperfused. Immediate graft function was optimal (AST 57 U/L, Bilirubin 3.32 U/L, INR 1.2 on day 7). No postoperative complications related to the liver occurred while other surgical complications complicated the postoperative course in this critically ill patient. The patient eventually recovered and was transferred to a rehabilitation center on day 49 after retransplantation. He continues to do well.
Conclusion: NMP of split liver grafts is feasible and can ease to logistics and convert the second split liver transplantation into a next day procedure.

PO064 FATAL IDIOPATHIC HYPERAMMONEMIA AFTER LIVER TRANSPLANATTION

Joo Seop Kim, Won Tae Cho, Tae You, Sam-Youl Yoon, Samuel Lee
Hallym University

Idiopathic hyperammonemia (IHA) is an extremely rare complication after liver transplantation (LT). Ornitine transcarbamylase deficiency or hepatic glutamine synthetase deficiency is suggested as a possible cause of IHA after LT. We present a case of a 54-year-old female patient with HBV and HCV-related liver cirrhosis who developed fatal IHA after cadaveric LT. The postoperative course was uneventful until the postoperative day 9. She presented sudden mental deterioration and respiratory failure with hyperammonemia (>700 μmol/L). Management to reduce serum ammonemia started. However, hyperammonemia was sustained without graft dysfunction. On the postoperative day 10, generalized seizure developed. EEG revealed brain death and the patient expired on the postoperative day 15 day with nearly normalized liver enzymes.

PO065 RAPID STEROID WITHDRAWAL AND SILENT DE-NOVO DONOR SPECIFIC ANTIBODIES AND SUBCLINICAL REJECTION ONE YEAR AFTER KIDNEY TRANSPLANTATION

Nina Visocnik[1], Manca Oblak[1], Gregor Mlinšek[1], Aljosa Kandus[1], Nika Kojc[2], Jadranka Buturovic-Ponikvar[1], Miha Arnol[1]
[1]University Medical Centre Ljubljana, Department of Nephrology; [2]University of Ljubljana, Medical Faculty, Institute of Pathology

Background: Long-term steroid intake increases cardiovascular and infection risks with negative outcomes after kidney transplantation. Steroid withdrawal (SW) may increase the risk of allograft rejection and occurrence of donor-specific antibodies (DSA). We aimed to assess whether rapid SW increases the incidences of silent *de-novo* DSA and subclinical rejection at 1 year after kidney transplantation.
Methods: This prospective study included 91 non-sensitized patients who received a kidney transplant between 2013 and 2016. All patients received basiliximab with tacrolimus, mycophenolate mofetil (MMF) and steroids. Patients with immediate graft function qualified for rapid SW on day 5. At 1 year, all recipients underwent surveillance graft biopsy and were screened for *de-novo* DSA. Positive sera were subjected to single antigen bead testing (LABScreen, One Lambda). The presence of silent *de-novo* DSA was determined based on a mean fluorescence intensity threshold > 1,000 and stable graft function (serum creatinine variability < 20% within the first year). Subclinical rejection was defined according to Banff criteria.
Results: Fifty-five (60%) patients underwent rapid SW, while 36 patients (40%) continued on maintenance steroid therapy. During the first year after transplant, we found no significant differences in tacrolimus trough levels, MMF doses, and eGFR slopes between the two groups. At 1 year after transplant, there were no significant differences in the incidences of silent *de-novo* DSA and subclinical T-cell or antibody-mediated rejection (Table).

	All patients (N = 91)	Rapid SW (n = 55)	Maintenance steroid therapy (n = 36)	p value
Silent de-novo DSA at 1 year				
Incidence	13 (14)	9 (16)	4 (12)	0.554
anti-HLA-class I	4 (4)	2 (4)	2 (6)	0.530
anti-HLA-class II	9 (10)	7 (12)	2 (6)	0.530
Median MFI value (IQR)	2600 (1980–4855)	9100 (1825–17445)	2600 (2020–3620)	0.604
Subclinical rejection at 1 year				
Incidence	23 (25)	12 (22)	11 (31)	0.127
T-cell mediated	19 (21)	10 (18)	9 (25)	0.299
Antibody-mediated	4 (4)	2 (4)	2 (6)	0.647
Banff classification				
T-cell mediated Banff 3	7 (8)	4 (7)	3 (8)	0.708
	7 (8)	4 (7)	3 (8)	0.708

Continued

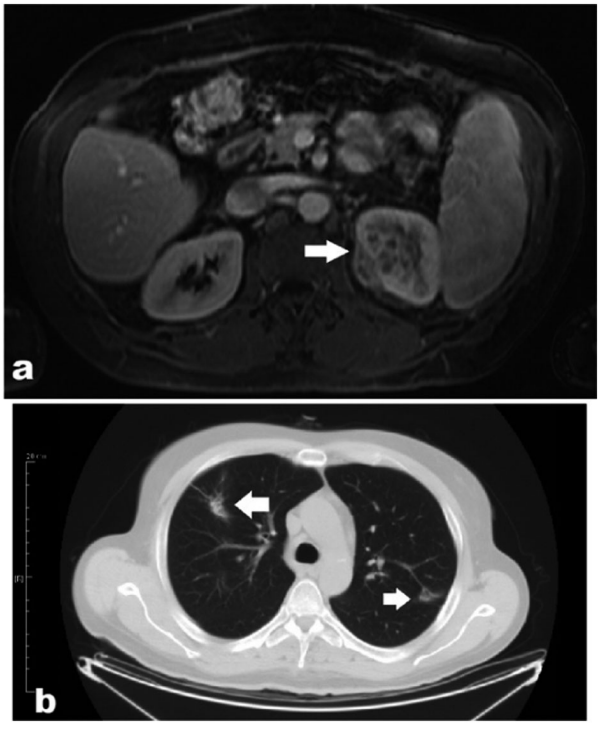
	All patients (N = 91)	Rapid SW (n = 55)	Maintenance steroid therapy (n = 36)	p value
T-cell mediated Banff 4/IA,B				
T-cell mediated Banff 4/IIA,B	5 (5)	2 (4)	3 (8)	0.678
Acute antibody-mediated Banff 2	4 (4)	2 (4)	2 (6)	0.647
Chronic antibody-mediated Banff 2	0	0	0	/

Rapid SW reduced incidences of post-transplantation diabetes to 2% and Polioma BK virus infection to 7% compared with 31% and 22%, respectively in the steroid maintenance group ($p < 0.05$).
Conclusion: Rapid SW in low immunological risk kidney transplanted patients can be achieved without loss of efficacy at 1 year and is advantageous in regard to incidences of post-transplantation diabetes and Polioma BK virus infection.

PO066 RENAL ASPERGILLOSIS IN A LIVER TRANSPLANT PATIENT

Brigita Smolovic[1], Batric Vukcevic[2], Damir Muhovic[1], Marina Ratkovic[1]
[1]Clinical Center of Montenegro; [2]Faculty of Medicine, University of Montenegro

Background: Aspergillosis is a frequent invasive fungal infection in liver recipients (affecting 1–9.2% of all patients), second only to candidiasis. Significant risk factors for invasive aspergillosis in liver recipients include corticosteroid therapy, neutropenia, T-cell dysfunction, renal failure and requirement for renal replacement therapy. Aspergillus infection usually affects the lungs of liver recipients, with hematogenous dissemination occurring in 50–60% of cases. Renal involvement is rare and is considered to occur in 0.4% of all cases of invasive aspergillosis.
Case Report: This paper describes a case of a liver recipient presenting with a newly formed renal mass a year after liver transplantation. The patient underwent liver transplantation due to alcoholic liver cirrhosis, with preoperative corticosteroid therapy and postoperative immunosuppressants (tacrolimus and mycophenolate mofetil). His 1-year follow-up was uneventful, with a satisfying graft function and lack of any symptoms. During a routine follow-up abdominal ultrasound, he was diagnosed with a renal tumor. The renal imaging findings were inconclusive (with a differential diagnosis to renal cell carcinoma) (Figure a), while the computed tomography (CT) of the chest showed scar tissue in the lungs suggestive of previous inflammation (Figure b). The patient underwent radical nephrectomy, with histopathological analysis showing renal aspergilloma, yielding postoperative treatment with voriconazole. His follow up was uneventful, and the chest CT did not show any change in pulmonary lesions. This case illustrates the possibility of aspergillosis affecting the lungs of liver recipients, subsequently affecting the kidney and forming an aspergilloma.
Conclusion: Clinicians should be aware of aspergilloma mimicking solid organ tumors in organ recipients.



PO067 NEPHRECTOMY POLYCYSTIC KIDNEY DISEASE PATIENTS WITH END-STAGE CHRONIC KIDNEY DISEASE

Ivan Dymkov[1], Dmitriy Perlin[2], Ilya Alexandrov[3], Shamil Bizhiev[3]
[1]Volgograd Regional Center Of Urology And Nephrology; [2]Department of Urology, Volgograd State Medical University, Volgograd, Russia; [3]Volgograd Regional Center of Urology and Nephrology, Volgograd, Russia

Background: In the structure of end-stage CKD polycystic kidney disease is about 8–10 %. These patients often required preparation for transplantation. In addition, enlarged kidneys are reducing the volume of the abdominal cavity, negative impact on the peritoneal dialysis (PD).
Methods/Materials: In 2005–2018 39 nephrectomies were performed in patients with end-stage CKD with polycystic kidney disease: 11 patients have undergone open nephrectomy, 12 patients laparoscopic nephrectomy and 16 retroperitoneoscopic nephrectomy. We analyzed postoperative period and complications, method of treatment end-stage CKD selected in future. In particular, we evaluated the effectiveness of peritoneal dialysis depending on the operating access.
Results: Complications: intraoperative bleeding was in 2 cases, damage of the spleen was in one. The significantly lower blood loss was in the group of operations performed endoscopic access. Subsequently, 15 patients were treated with hemodialysis (HD), 24 patients PD. The effectiveness of PD was estimated by 3 months and 1 year after start treatment by kt/v. In the group of patients with open nephrectomy, the effectiveness on average was 1.61 and 1.44 respectively. Patients underwent laparoscopic nephrectomy the efficiency is in average of 1.72, and 1.59, retroperitoneoscopic nephrectomy 1.87, 1.73 respectively. The conversion method of PD-treatment to the HD within 6 months after surgery was required in 5 patients (open nephrectomy technique), 2 patients (laparoscopic technique), no one patient (retroperitoneoscopic technique) was not required for the conversion PD to HD.
Conclusion: Our experience of nephrectomies in patient with end-stage CKD indicate the safety and effectivity of the endoscopic technique and its applicability to patients on PD. Retroperitoneoscopic access has less impact on the effective area of the peritoneum, which is reflected in the subsequent course of PD.

PO068 CONTRAST-ENHANCED ULTRASOUND FEATURE AMONG PATIENTS WITH KIDNEY ACUTE GRAFT DYSFUNCTION: A PILOT STUDY

Alina Daciana Elec[1], Sorana Bolboaca[2], Adriana Muntean[1], Mihai Socaciu[2], Alexandra Andries[2], Razvan Zaro[2], Radu Ignat[2], Ramona Contis[2], Gheorghita Iacob[1], Florin Elec[1], Radu Badea[2]
[1]Clinical Institute of Urology and Renal Transplantation; [2]University of Pharmacy and Medicine Iuliu Hatieganu

Aim: The pattern of Contrast-Enhanced Ultrasound (CEUS) according with the type of rejection and type of proteinuria had been investigated on patients with acute graft dysfunction.
Materials and Methods: Transplanted patients at the Clinical Institute of Urology and Renal Transplantation Cluj-Napoca from October 2017 to November 2018 with acute graft dysfunction followed by biopsy were asked to participate in the study. Ultrasound (volume), Doppler (resistive index (RI)) and CEUS with SonoVue contrast agent (thirteen parameters) was performed for all patients.
Results: Twenty patients with documented kidney biopsy, age from 23 to 63 years (median of 40.5 years), 5 women and 15 men, 4 obese and 5 overweight were included in the study. In 14/20 cases the cellular rejection was observed (4 borderlines, 2 as type IA, 2 of type IIA, and 6 of type IB), 2/20 as humoral rejection, 3/20 as no rejection and one case of IFTA (interstitial fibrosis and tubular atrophy). One patient was with normal proteinuria, thirteen with nephritic and six with nephrotic proteinuria. No significant differences between patients with cellular and humoral rejections were observed (p-values > 0.06). Significantly smaller kidney volume (median 154 vs. 205; $p = 0.022$) was observed on patients with IFTA. Regarding the CEUS parameters, significant lower values on patients with obesity vs. overweight were observed for wash-in and wash-out area under the curve (AUC) (p-values = 0.027) while the cortical quality of fit proved significantly lower values on overweight vs. normal weight patients ($p = 0.020$). Wash-in (CWiR) and wash-out rate (CWoR) on cortical

proved significantly smaller among patients with nephrotic vs. nephritic proteinuria (p-values = 0.044).
Conclusion: CEUS parameters significantly differentiate patients with nephritic vs. nephrotic proteinuria, are significantly modified up to the weight of the patients with rejection but are not significantly different regarding the type of rejection.

PO069 CYTOMEGALOVIRUS PREVENTION STRATEGIES AND THE RISK OF BK POLYOMAVIRUS VIREMIA AND NEPHROPATHY

Tomas Reischig[1], Martin Kacer[1], Ondrej Hes[1], Jana Machova[1], Jana Nemcova[2], Daniel Lysak[1], Lukas Kielberger[1], Lenka Benesova[3]
[1]Faculty of Medicine in Pilsen, Charles University, and Teaching Hospital; [2]Faculty of Medicine in Pilsen, Charles University; [3]Teaching Hospital in Pilsen

Background: Polyomavirus BK (BKV) is the cause of polyomavirus-associated nephropathy (PVAN) resulting in premature graft loss. There are limited data regarding the role of cytomegalovirus (CMV) infection and its prevention in developing BKV viremia and PVAN.
Methods: In a prospective study, we analyzed 207 consecutive renal transplant recipients previously enrolled to 2 randomized trials evaluating different CMV prevention regimens with routine screening for BKV and CMV. Of these, 59 received valganciclovir and 100 valacyclovir prophylaxis, 48 patients were managed by preemptive therapy.
Results: At 3 years, the incidence of BKV viremia and PVAN was 28% and 5%, respectively. CMV DNAemia developed in 55% and CMV disease in 6%. Both BKV viremia (42% vs. 23% vs. 21%, $p = 0.006$) and PVAN (12% vs. 2% vs. 2%, $p = 0.011$) were increased in patients treated with valganciclovir prophylaxis compared to valacyclovir and preemptive therapy. Using multivariate Cox proportional hazard regression, valganciclovir prophylaxis was independent predictor of BKV viremia (hazard ratio [HR]=2.38, $p = 0.002$) and PVAN (HR = 4.73, $p = 0.026$). In contrast, the risk of subsequent BKV viremia was lower in patients with antecedent CMV DNAemia (HR = 0.50, $p = 0.018$).
Conclusion : These data suggest that valganciclovir prophylaxis is associated with increased risk of BKV viremia and PVAN. CMV DNAemia did not represent a risk for BKV.

PO070 SUCCESSFULL 30 H PRESERVATION AND TRANSPLANTATION OF A DCD DONOR LIVER IN THE ERA OF NORMOTHERMIC MACHINE PERFUSION

Benno Cardini[1], Rupert Oberhuber[1], Valeria Berchtold[1], Silvia Gasteiger[1], Manuel Maglione[1], Christian Margreiter[1], Thomas Resch[1], Stefan Scheidl[1], Claudia Bösmüller[1], Florian Augustin[1], Werner Pajik[2], Robert Breitkopf[2], Dietmar Öfner-Velano[1], Annemarie Weissenbacher[1], Sefan Schneeberger[1]
[1]Department of Visceral, Transplant and Thoracic Surgery, Medical University of Innsbruck; [2]Department of Anaesthesiology and Critical Care Medicine, Medical University of Innsbruck

Introduction: Normothermic machine perfusion (NMP) has been shown to be a safe and valuable. It enables for evaluation of marginal donor livers due to a observation period under physiological conditions. We herein present the case of a normothermically perfused and transplanted marginal donor liver
Patient and Method: A 62 years old DCD (Maastricht III) liver was accepted for a 65-year-old recipient, suffering from ASH with HCC (MELD 16, ET Match-MELD 22). The donor was female, with hypoxia as cause of death, 15 min resuscitation. Functional warm ischemia was 4 min. ET-DRI was 3.17. NMP was applied in a back-to-base fashion after a cold ischemic time of 395 min. NMP parameters were within normal limits over the entire observation period of 1,412 min. Lactate decreased from 87 mg/dl to 0 mg/dl, pH was physiological after substitution of 20 ml sodium bicarbonate. Glucose consumption was noticed after 4 h of normothermic perfusion. After a total preservation time of 1,807 min (30 h 7 min) the liver was successfully transplanted. The patient presented at the 3-month follow-up in good clinical condition with normal liver function tests (AST 17U/l, ALT 8U/l, gGT 44U/l, INR 1.1) without any signs of biliary complications.
Conclusion: To our knowledge this is the longest preservation time of a DCD-liver allograft followed by successful transplantation. NMP is a valuable option to evaluate marginal donor organs enabling to safely enhance the donor pool.

PO071 DEVELOPMENT OF A NOVEL LINEAR MODEL FOR PREDICTING RECIPIENT'S POST-TRANSPLANT SERUM CREATININE LEVEL AFTER LIVING DONOR KIDNEY TRANSPLANTATION: A MULTICENTER CROSS-VALIDATION STUDY

Jinsoo Rhu, Jiyoun Hong, Jae Berm Park, Kyo Won Lee, Kyeongdeok Kim, Okjoo Lee
Samsung Medical Center, Sungkyunkwan University School of Medicine

Background: This study was designed to develop and cross-validate a statistical model for predicting post-transplant serum creatinine of living donor kidney transplantation.
Materials and Methods: Adult recipients of living donor kidney transplantation from August 2012 to October 2017 at Samsung Medical Center (SMC) and Seoul National University Hospital (SNUH) with normal post-transplant protocol biopsy were included for modelling. Demographic data including recipient and donor's sex, age, body measurements and comorbidities, pre-transplant donor serum creatinine, graft weight, post-transplant recipient serum creatinine and the result of protocol biopsy were collected. Multivariate linear regression analysis was performed for developing the model based on SMC cohort. Internal validation was performed using leave-one-out cross-validation with the same cohort. External validation using leave-one-out cross-validation was performed based on the cohort of SNUH.
Results : A total of 238 and 191 recipients were included from SMC and SNUH, respectively. The prediction model included recipient's sex (β=0.228, $p < 0.001$), height (β=0.007, $p < 0.001$), and weight (β=0.006, $p < 0.001$), donor's age (β=0.004, $p < 0.001$), height (β=−0.007, $p < 0.001$), pre-transplant serum Cr (β=0.377, $p < 0.001$) and graft weight (β=−0.002, $p < 0.001$). The model showed R2 of 0.708, root mean square error of prediction (RMSEP) of 0.161 and intraclass correlation coefficient (ICC) of 0.83. The internal validation showed predicted ICC of 0.82, RMSEP of 0.161, and accuracy was calculated 0.895. The external validation showed predicted ICC of 0.78, RMSEP of 0.170, and accuracy was calculated 0.876.
Conclusions: The linear prediction model based on body measurement and donor serum creatinine and graft weight showed a high accuracy in cross-validation.

PO072 HIGH RISK OF REJECTION IN ONE YEAR KIDNEY GRAFT PROTOCOL BIOPSIES AND DEATH CENSORED GRAFT LOSS IN PATIENS WITH DE NOVO DSA

Anna Varberg Reisæter, Geir Mjøen, Christina Dørje, Clara Louise Hammarstrøm, Karsten Midtvedt, Anders Åsberg
Oslo University Hospital

Background: Development of de novo donor-specific HLA antibodies (dnDSA) post-engraftment is a critical feature contributing to kidney graft pathology and graft loss. We analyzed the risk of developing 1) Banff borderline/cellular rejection in a protocol biopsy at one year and 2) death censored graft loss in patients developing dnDSA first year after transplantation.
Methods: Patients transplanted 2009–2014 with no preformed HLA antibodies were eligible. Recipients with assessment of dnDSA during the first post-transplant year and a one year protocol biopsy were included ($n = 979$). All patients received basiliximab induction and triple maintenance immunosuppression with tacrolimus (through 3–7 μg/L), mycophenolate and steroids. A positive protocol biopsy was defined as Banff t score ≥ 1 combined with any i and v score. Logistic regression adjusted for recipient age, gender, deceased donor, retransplantation and HLA-DR mismatch was performed to assess associations between dnDSA positivity and findings in one-year protocol biopsy. Cox regression adjusted for the same covariates was performed to assess associations with death censored graft loss. Mean follow up was 56.6 (SD ± 21.1) months.
Results:
Table 1. Protocol biopsy findings in dnDSA positive vs. negative patient

	Negative biopsy	Positive biopsy	Total
dnDSA negative	634 (70%)	277 (30%)	911 (100%)
dn DSA positive	28 (41%)	40 (59%)	68 (100%)

Adjusted odds ratio (95% CI) for a positive biopsy in dnDSA positive versus dnDSA negative patients was 3.3 (2.0, 5.6). Correspondingly, the development of dsDSA during the first year after transplantation was significantly associated with death-censored graft loss with adjusted HR of 3.7 (2.1, 5.5).
Conclusion: Appearance of dnDSA within the first year of kidney transplantation is a risk factor for development of Banff borderline/ cellular rejection in one-year protocol biopsies. More importantly dnDSA is associated with increased risk of death censored graft loss. Our findings suggest that also cellular rejection plays an important role in graft injury and loss of function in patients with dnDSA.

PO073 URINARY BIOMARKERS α-GST AND π-GST FOR EVALUATION AND MONITORING IN LIVING AND DECEASED DONOR KIDNEY GRAFTS

Shadi Katou[1], Anja Reutzel-Selke[2], Marion Marksteiner[2], Jens Brockmann[1], Andreas Pascher
[1]UK Muenster; [2]Charite University Berlin

Background: Aim of this study was to analyze the value of α- and π-GST in urine to monitor and predict the course of kidney graft function in the early phase after transplantation and to characterize its potential value to predict organ quality from corresponding donor urine analyses.
Methods: We prospectively analyzed urine samples from brain dead ($n = 30$) and living related ($n = 50$) donors and their corresponding recipients over a course of seven days in our center. Urinary α- and π-GST values were measured. Kidney recipients were sub-grouped into patients with acute graft rejection (AGR), calcineurin inhibitor toxicity (CNI), delayed graft function (DGF) and compared to those without any adverse events.
Results: Urinary π-GST revealed significant differences in deceased kidney donor recipients with recorded episodes of AGR or DGF at day one after transplantation ($p = 0.0023$ and $p = 0.036$, respectively). High π-GST values at first postoperative day POD1 (cutoff > 21.4 ng/mg uCrea or > 18.3 ng/mg uCrea for AGR or DGF, respectively) distinguished between rejection and no rejection (sensitivity, 100%; specificity, 66.6%) as well as between DGF and normal-functioned grafts (sensitivity, 100%; specificity, 62.6%). In living donor recipients, urine levels of α- and π-GST were about ten times lower than in deceased donor recipients. In deceased donors with impaired graft performance in corresponding recipients urinary α- and π-GST were elevated. α-GST values > 33.97 ng/mg uCrea were indicative of AGR with a sensitivity and specificity of 77.7% and 100%, respectively. However, in the complex setting of transplantation, determination of α- and π-GST urine levels alone was incapable to distinguish between different causes of kidney graft damage.
Conclusion: In deceased donor kidney transplantation, evaluation of urinary α- and π-GST seems to predict different events that deteriorate graft function. To elucidate the potential advantage of.

PO074 CHARACTERISTICS OF INCIDENTAL HEPATOCELLULAR CARCINOMA AFTER LIVER TRANSPLANTATION: EXPERIENCE OF 20 YEARS

Raquel Ríos León, Eugenia Sánchez Rodríguez, Antonio Martínez Ortega, Enrique Rodríguez de Santiago, Natalia Marcos Carrasco, Francisco Gea Rodríguez, Javier Graus Morales, José Luis Lledó Navarro, Agustín Albillos Martínez, Miguel García González
Hospital Universitario Ramón y Cajal

Background: Despite advances in imaging diagnostic modalities, hepatocellular carcinoma is sometimes incidentally diagnosed on histological examination of the liver explant. Our objectives were: 1) To compare the characteristics between incidental hepatocellular carcinoma (iHCC) and known hepatocellular carcinoma (kHCC) and 2) To estimate survival and tumor recurrence after liver transplantation (LT).
Material and methods: Retrospective, single-center study. The inclusion criteria were 1) cirrhotic patients, age ≥ 18 years, 2) LT between January 1998 and January 2018 and 3) hepatocellular carcinoma diagnosed on the histopathologic examination of the explanted liver. Cholangiocarcinoma patients and patients with early retransplantation (7 days) were excluded. Prelisting assessment consisted of computed tomography and/or magnetic resonance imaging in all patients. If no suspicious lesion was found on neither of these tecniques, an ultrasound was conducted every 3 months in all patients. Multivariate analysis was performed using binomial logistic regression to assess the factors associated with iHCC. Kaplan-Meier curves (Log-rank test) were used to explore the impact of iHCC on overall survival and recurrence free survival.
Results: Two hundred ninety patients were initially selected and 269 patients were finally enrolled. The median follow-up after LT was 61.3 months (IQR = 23.6–119.4). The prevalence of iHCC was 3.77% (95% CI 2.6–5.4%), no differences between the LT prior to 2008 ($n = 14$) and after 2008 ($n = 13$).
Results are shown in table 1.

	Incidental hepatocellular carcinoma ($N = 27$)	Known hepatocellular carcinoma ($N = 242$)	Univariate/ multivariate
Age (years)	60 ± 15	57 ± 11	0.55
Male sex	21 (77.8%)	198 (81.8%)	0.61
HIV	3 (11.1%)	16 (6.6%)	0.42
Hepatitis C	18 (66.7%)	159 (66%)	0.94
Hepatitis B	3 (11.1%)	24 (10%)	0.85
Alcohol	14 (51.9%)	75 (31.1%)	0.03
Other aetiologies	2 (7.41%)	20 (8.3%)	1
More than 1 etiology	10 (37%)	36 (15%)	
			0.012/ 0.007
Average tacrolimus trough level in the first month (ng/ml) (median, interquartile range)	8.16 (5.57 to 11.64)	9.4 (6.78 to 12.74)	0.43
Everolimus started without tumor recurrence	5 (18.5%)	66 (27.3%)	0.93
Length within waiting list (days) (median, interquartile range)	246 ± 256	212 ± 253	0.35
Pre-liver transplant alpha-fetoprotein (ng/ml) (median, interquartile range)	16.24 ± 54.11	24.43 ± 8.37	0.59
Main nodule diameter (mm) (median, interquartile range)	20 ± 15	27 ± 16	<0.001/ 0.004
Multinodular	12 (44.4%)	100 (41.3%)	0.06
Existence of any recurrence data risk	5 (18.5%)	52 (21.9%)	0.68
Satellitosis	2 (7.4%)	27 (11.2%)	0.75
Microvascular invasion	2 (7.4%)	25 (10.3%)	1
Poor tumor differentiation	0 (0%)	15 (6.3%)	0.38
Within Milan criteria	20 (74.1%)	188 (78%)	0.64
Within Up to Seven criteria	21 (77.8%)	223 (92.5%)	0.02/0.001
Overall survival rates 5 years	52.5%	55.4%	0.87
Recurrence-free survival 5 years	100%	83.8%	0.07

Conclusion: IHCC is found in 3.77% of LT candidates and occurrs more frequently in patients with more than one etiology responsible for their liver damage. Incidental hepatocarcinomas are more frecuently found to be beyond the Up to Seven criteria on explant examination. However, no differences are found in overall survival rates or recurrence-free survival at 5 years, although in the iHCC group there is no tumor recurrence.

PO075 PREDICTION OF KIDNEY TRANSPLANT OUTCOME BASED ON DIFFERENT DGF DEFINITIONS IN CHINESE DECEASED DONATION

Xiaojun Hu, Jin Zheng, Yang Li, Wujun Xue
the first affiliated hospital of Xi'an jiaotong university

Background: Donation after circulatory death (DCD) has become the most universal sources of organs. Delayed graft function (DGF) is an important complication of kidney transplant and is closely related to DCD. DGF can be diagnosed according to different definitions.

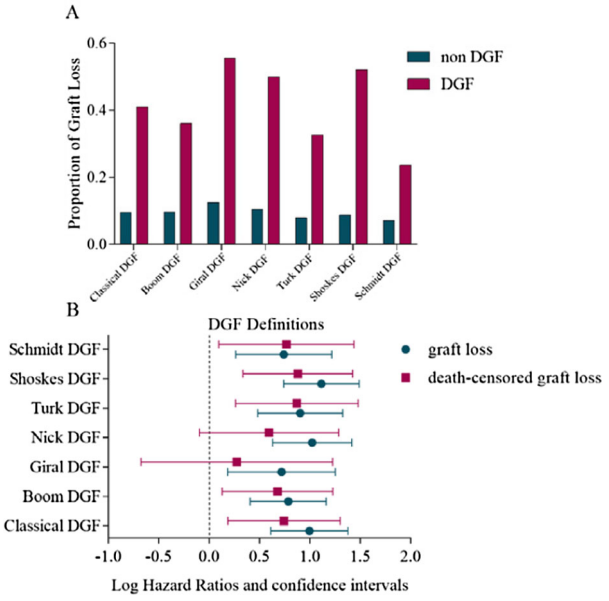
Abbreviation	Definition	Incidence
Classical-DGF	the need for at least one dialysis in the first week after Tx	20.93%
Boom-DGF	serum creatinine increased or remained unchanged or decreased < 10%/day during 3 consecutive days after Tx	20.24%
Giral-DGF	time required for the kidney to reach creatinine clearance > 10 ml/min greater than 1 week	5.01%
Nick-DGF	failure of creatinine to decline in the first 48 h in the absence of rejection	10.65%
Shoskes-DGF	urine output < 75 ml/h in first 48 h or failure of serum creatinine to decrease by 10% in the first 48 h	12.43%
Turk-DGF	serum creatinine > 2.5 mg/dl on Day 7 or the need for post-transplant hemodialysis	28.94%
Schmidt-DGF	Urine output < 1L in 24 h and < 25% fall in serum creatinine from baseline in first 24 h post-transplant	50.89%

DGF was proved to be associated to the long term outcome of kidney transplantation surgery. Which DGF definition is the best to predict the renal transplant outcome in Chinese DCD remains to be figured out.
Method: The retrospective study recorded 182 recipients of a single kidney transplant. Recipients were diagnosed whether DGF happens according to 7 different DGF definitions. All patients were followed up at least 3 years.

Transplant nephrectomy and patient death were defined as graft loss. Relativity between DGF definitions and three year graft loss posttransplant was analyzd.
Results: The incidence of DGF varied from 5.01% to 50.89% according to different DGF diagnosis.

Abbreviation	Definition	Incidence
Classical-DGF	the need for at least one dialysis in the first week after Tx	20.93%
Boom-DGF	serum creatinine increased or remained unchanged or decreased < 10%/day during 3 consecutive days after Tx	20.24%
Giral-DGF	time required for the kidney to reach creatinine clearance > 10 ml/min greater than 1 week	5.01%
Nick-DGF	failure of creatinine to decline in the first 48 h in the absence of rejection	10.65%
Shoskes-DGF	urine output < 75 ml/h in first 48 h or failure of serum creatinine to decrease by 10% in the first 48 h	12.43%
Turk-DGF	serum creatinine > 2.5 mg/dl on Day 7 or the need for post-transplant hemodialysis	28.94%
Schmidt-DGF	Urine output < 1L in 24 h and < 25% fall in serum creatinine from baseline in first 24 h post-transplant	50.89%

All DGF definitions were significantly associated with three-year graft loss. 2 DGF definitions consists of 48 h creatine decline ratio were better than classical one via multivariate cox regression. All DGF definitions had considerable predictive power for poorer transplant outcome. None of DGF definitions were significantly better than first week dialysis based DGF definition.
Conclusion: Serum creatinine decline ratio in the first 48 h should be paid special attention except for the hemodialysis need based DGF happening. Kidneys with high risk to develop DGF should be avoid to improve the transplant outcome.



PO076 EARLY POST-TRANSPLANT BLOOD TRANSFUSIONS AND GRAFT OUTCOME IN PEDIATRIC RENAL TRANSPLANT RECIPIENTS

Esra Baskin[1], Ozlem Kazanci[1], Nihal Uslu[2], Kaan Gulleroglu[1], Ebru H. Ayvazoglu Soy[3], Gokhan Moray[3], Mehmet Haberal [3]
[1]the Department of Pediatric Nephrology, Faculty of Medicine, Baskent University, Ankara; [2]the Department of Radiology, Faculty of Medicine, Baskent University, Ankara; [3]the Department of Transplantation, Faculty of Medicine, Baskent University, Ankara

Introduction: Anemia is commonly observed in early post-transplant period. Blood transfusion is the most frequent using procedure in correction of anemia. However early post transplant blood transfusions may increase immunological risks, antibody formation and rejection. There is little information on the impact of post-transplant transfusions in children. We aimed to evaluate effects of early post-transplant blood transfusion on graft outcome in pediatric renal transplant recipients.
Materials and Methods: We retrospectively evaluated the data of 97 renal transplant patients. Demographic data of patients, etiology of renal failure, donor types, rejections, infections, and graft outcomes were recorded. We have documented all blood transfusions given within the first one month after transplantation. All transfused blood components were leuko-depleted. Data of patients with transfused and non-transfused were compared with respect of renal outcome.
Results: A total of 97 patients were included study (F/M:44/52). Mean transplant age of the patients was 14.43 ± 4.76 years and the mean duration of follow-up was 48 ± 12.76 months. Twenty two patients (22.6%) had received a blood transfusion within the first month after transplantation. Transfused patients had significantly younger than non-transfused patients (9.1 ± 3.2 and 12.7 ± 4.5 respectively, $p < 0.05$). The median time for first blood transfusion was 2 days (0–30 days), the median number of transfusions was 1 (range:1–7) after renal transplantation. Donor types, gender, HLA mismatch, graft loss and, PRA formation were similar in both groups ($p > 0.05$).
Conclusions: Post transplant blood transfusions are common in children especially in young patients. Our study showed that early transfusions (leuco-depleted) have no negative association with increased acute and chronic rejection, PRA production and graft loss. Further studies are needed for better evaluate the long-term risk of post-transplant blood transfusi

PO077 PREDICTIVE SCORE MODEL FOR DELAYED GRAFT FUNCTION BASED ON DONOR DEMOGRAPHIC AND CLINICAL CHARACTERISTICS IN CHINESE DONATION AFTER CARDIAC DEATH

Wujun Xue[1], Changxi Wang[2], Xuyong Sun[3], Jianghua Chen[4], Qingshan Qu[5]
[1]The First Affiliated Hospital of Xi'an Jiaotong University; [2]First Affiliated Hospital of Sun yat-sen university; [3]303 hospital; [4]The first affiliated college of zhejiang university; [5]the hospital of Zhengzhou City

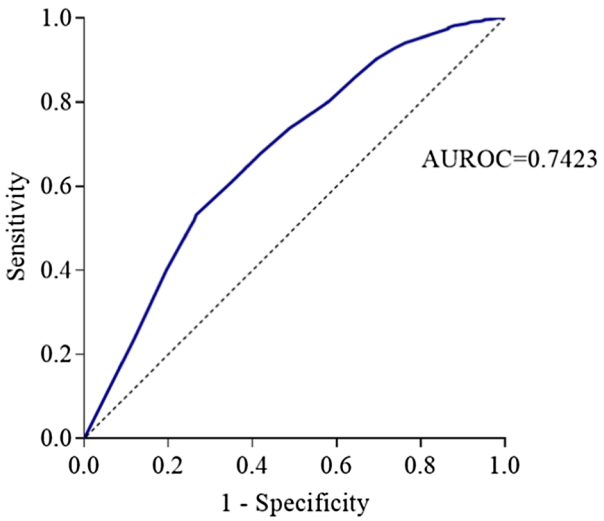
Background: The predictors of delayed graft function (DGF) in DCD remain controversial. This study aimed to investigate the impact of donor's characteristics on DGF and develop a donor risk score system.
Methods: Donor risk factors of DGF were studied in 1,875 donors and 3,889 recipients overall China from November 2011 and June 2018. Both univariate and multivariate logistic regression analysis were applied to assess the impact of donor risk factors and a risk score system was developed according to the logistic regression results.
Results: There were 573 recipients developed DGF after transplantation. Overall DGF rate was 20.48%. Univariate analysis of donor risk factors showed a significant increase of recipients' DGF risk with kidneys coming from donors older than 49 years old, donors with a history of hypertension, a cerebrovascular or hypoxic ischemic encephalopathy cause of death, a donor with history of CPR or/and episodes of hypotension, a pre-harvesting serum creatinine greater than 177 μmol/L. multivariate analysis revealed CPR, pre-harvesting serum creatinine more than 442 μmol/L, episodes of hypotension was the top three donor risk factors for DGF happening. A 49-point score was developed, with DGF risk ranging from 0.0% to 92%. AUROC to predict risk was 0.7418.
Conclusion: A simple-to-use risk score that uses donors' baseline clinical variables was developed. The score accurately estimates the risk of developing DGF for recipients accepted transplanted kidneys from donation after cardiac death. Clinicians can use this score to help make evidence-based decisions about their clinical management.

Variables	Risk (%)	OR (95% CI)	*p* value
Donors' characteristic			
Age		1.00 (0.99, 1.01)	0.594
16–40 years	15.2	0.76 (0.17, 0.98)	0.044
40–49 years	22.0		
49–65 years	24.4	1.51 (1.15, 1.97)	0.002
≥65 years	29.7	1.38 (0.96, 1.97)	0.077
Male	20.35	0.99 (0.72, 1.33)	0.944
BMI		1.00 (0.97, 1.00)	0.715
Cause of death			
Trauma	15.2		
CVA/stroke	25.6	1.93 (1.50, 2.47)	<0.001
HIE	32.5	2.69 (1.73, 4.11)	<0.001
Others	22.5	1.63 (1.08, 2.41)	0.017
History of hypertension	26.8	2.4 (1.84, 3.12)	<0.001
No	18.3		
0~4 years	29.5	1.86 (1.36, 2.54)	<0.001
5~9 years	32.1	2.11 (1.29, 3.36)	0.002
≥10 years	40.0	2.97 (0.99, 8.29)	0.041
CPR	35.3	3.39 (2.27, 5.04)	0.016
No	19.8		
0~10 min	30.8	3.33 (2.02, 5.42)	<0.001

Continued

Variables	Risk (%)	OR (95% CI)	*p* value
10~29 min	46.7	3.45 (1.53, 7.54)	0.002
≥30 min	60.0	3.53 (1.15, 10.22)	0.020
Pre-harvesting creatinine			
<177 μmol/L	17.9		
177–265 μmol/L	34.9	2.46 (1.67, 3.60)	<0.001
265–442 μmol/L	35.9	2.57 (1.57, 4.13)	<0.001
>442 μmol/L	77.8	16.09 (5.72, 57.08)	<0.001
Episodes of hypotension			
Non	20.7		
I	30.0	1.79 (1.18, 2.67)	0.005
II	46.9	3.68 (1.79, 7.46)	<0.001

Variables	OR (95% CI)	*p* value	β value	Score
Donors' characteristic				
Age				
16–40 years				0
40–49 years	1.07 (0.99, 1.78)	0.069	0.10	1
49–59 years	1.37 (1.03, 1.83)	0.032	0.31	3
≥60 years	1.25 (0.84, 1.84)	0.261	0.22	2
Cause of death				
Brain trauma				0
Cerebrovascular accident	1.33 (0.96, 1.84)	0.081	0.28	3
HIE	1.82 (1.06, 3.01)	0.024	0.59	6
Others	1.34 (0.83, 2.12)	0.221	0.29	3
History of hypertension				
No				0
0–4 years	1.65 (1.09, 2.48)	0.017	0.49	5
5–9 years	1.83 (1.11, 2.98)	0.016	0.60	6
≥10 years	1.98 (1.04, 3.66)	0.032	0.68	7
CPR				
No				0
0–10 min	1.68 (0.45, 5.64)	0.414	0.51	5
10–29 min	1.94 (0.76, 4.68)	0.149	0.66	7
≥30 min	2.24 (1.3, 3.79)	0.003	0.80	8
Pre-harvesting creatinine (μmol/L)				
<177				0
177–265	2 (1.31, 3.02)	0.001	0.69	7
265–442	2.09 (1.27, 3.38)	0.003	0.73	8
>442	5.59 (2.24, 14.38)	<0.001	1.72	17
Episodes of hypotension				
Non				0
I	1.68 (1.08, 2.57)	0.019	0.51	5
II	2.31 (1.18, 4.41)	0.012	0.83	8



PO079 IMPACT OF LUNG RETRANSPLANTATION ON SURVIVAL IN PATIENTS LISTED FOR REPEAT TRANSPLANTATION: RESULTS FROM A NATIONAL COHORT STUDY

Christelle Cantrelle[1], Jérome Le Pavec[2], Camille Legeai[1], Clément Picard[3], Pierre Emmanuel Falcoz[4], Martine Reynaud Gaubert[5], Jean François Mornex[6], Olivier Bastien[1], Richard Dorent[1]

[1]Agence de la biomédecine; [2]Hôpital Marie Lannelongue; [3]Hôpial Foch; [4]Hôpital civil Strasbourg; [5]Hôpital Nord APHM Marseille; [6]Hôpital Louis Pradel HCL Lyon

Background: The benefit of lung retransplantation (LRT) has not yet been established. This study aims to evaluate LRT on survival in patients listed for redo procedure on the French national waiting list.
Methods/Materials: All patients who underwent primary lung transplantation between January 2007 and December 2016 in France and who were relisted (R+) were included in the cohort study. A Cox model evaluated the effect of LRT as a time dependent variable on R+ patients' survival.
Results: Of the 2,709 primary transplant recipients, 114 were relisted and 75 underwent LRT. The median time from first transplantation to relisting was 27 months (IQR: 15–44). R+ patients were younger (mean age = 37 ± 16y vs. 46 ± 15 y, $p < 0.0001$) and more often had first transplantation indications of cystic fibrosis (CF) or bronchiectasis without CF (44% vs. 33%, $p = 0.03$) than non-relisted patients (R−). R+ first grafts came from younger donors (mean age = 42 ± 17y vs. 45 ± 15y, $p < 0.0001$). Double lung transplantation was not significantly different between the groups (87% vs. 81%, respectively in R+ and R− groups, $p = 0.11$). The mean age of R+ patients was 37 ± 16 years and 46% were female. Main indications for first transplantation were: CF or bronchiectasis ($n = 50$), chronic obstructive pulmonary disease ($n = 28$), pulmonary fibrosis ($n = 16$). At relisting 18 patients were on a ventilator, 3 on ECMO support and 8 on inotropic infusion. Sixty-one patients waited at home and 53 in hospital. Redo procedures included double lung ($n = 56$) and single lung ($n = 19$) transplantation. One-year post-relisting survival was 73% and 27% respectively in relisted patients with and without LRT. The Cox model of recipient death with LRT as a time dependent variable yielded a hazard ratio of 0.67 (95% CI 0.37 to 1.2) in redo transplant patients.
Conclusion: LRT tends to offer a survival benefit for lung transplant recipients listed on the waiting list for redo transplantation. Further analysis is ongoing to clarify this trend.

PO080 AUDIT: TOOL TO IMPROVE ORGANIZATIONS IN CHARGE OF ORGANS AND TISSUES PROCUREMENTS

Séverine Grelier
Agence de la biomédecine

Background : The Agence de la biomédecine (Agency) is responsible to develop quality management projects aiming to further health safety in its competency areas. Since 2017, the Agency sets up new modalities of audit for organs and tissues procurements organizations (organizations). These new modalities lead all doctors and head-nurses from the Agency performing audits of the authorized organizations.
Methods/Materials: The Agency defined criteria to determine the priority of the organizations to be audited. The Agency informs the hospitals several months before the planned audit in order to allow them to prepare it. The procurement team of the organizations evaluates its activity using the Agency guidelines. The team sends to the Agency auditors its evaluation with documentary evidences. A doctor and a head-nurse of the Agency perform the audit of the organizations during two days. The criteria are evaluated and are classified as totally, partially or not complied with, taking into account the responses of the team. The auditors write and send a report to the organization. An adversarial phase is possible for the organization in order to respond to auditor's remarks. The Quality department of the hospital will then do the follow-up of the actions plan.
Results: From April to December 2017, 14 organizations have been audited; 25 in 2018 and 28 are planned in 2019. In order to encourage organizations to improve their results, the auditors make three levels of recommendations for each criteria: improvements proposed, improvements needed, actions required. Since 2017, the average number of recommendations provided to audited organizations is 15 improvements proposed, 6 improvements needed and 2 actions required.
Conclusion: The new modalities of audits are providing opportunities for quality improvements to organizations in charge of organs and tissues procurement. The audit provides useful interactions with professionnals that lead them improving their pratices.

PO081 DOES THE TYPE OF PRESERVATION FLUID IMPACT ON OUTCOMES AFTER LIVER TRANSPLANTATION?

Julie Navez, Desislava Germanova, Sarah Landenne, Antonella Putignano, Christophe Moreno, Nathalie Boon, Delphine Degré, Bigitte Ickx, Rudy Surin, Vincent Donckier, Thierry Gustot, Valerio Lucidi
Hôpital Erasme

Background: Preservation solutions used for organ procurement and transportation before liver transplantation (LT) differ in their electrolytes content and density. The influence of the solution type on liver function recovery and postoperative complications after LT still remains controversial. We aimed to compare the outcomes of patients after LT according to the type of preservation solution.
Methods/Materials: All patients undergoing LT at our institution were retrospectively reviewed from a prospectively maintained database. Early allograft dysfunction was assessed according to Olthoff's, Dhillon's and MEAF's scores. Postoperative and long-term outcomes were compared between grafts preserved with UW, HTK or IGL-1 solutions.
Results: Between 2007 and 2018, 432 LT were performed on 403 patients, divided into IGL-1 ($n = 111$), HTK ($n = 186$) and UW ($n = 135$) groups. The median recipient age at LT was 56 years old and sex ratio 2.1 (291 men, 141 women). No difference was observed between groups according to sex, age, BMI and Child-Pugh scores. The postoperative mortality was similar between groups, such as the rate of biliary fistula and retransplantation for primary non function. Less early allograft dysfunction were observed in IGL-1 compared to HTK and UW groups according to Olthoff's definition (51% vs. 69% and 72%, $p <= 0.005$), and compared to only HTK group according to MEAF score (12% vs. 21%, $p = 0.044$). After a median follow-up of 35 months (shorter in IGL-1 compared to HTK and UW groups: 20 vs. 48 and 92 months, $p < 0.001$), biliary stricture was less frequent in IGL-1 compared to HTK and UW groups (14% vs. 33% and 31%, $p < 0.005$); the median delay for developing biliary stricture was similar between groups, ranging from 4 to 5 months.
Conclusion: IGL-1 solution seems to have some benefits on liver function recovery and could reduce the incidence of biliary stricture after LT, compared to HTK solution.

PO082 DONOR-DERIVED CELL-FREE DNA DETECTS KIDNEY TRANSPLANT REJECTION DURING NIVOLUMAB TREATMENT

Jeroen Verhoeven[1], Daan Hurkmans[2], Kitty de Leur[2], Karin Boer[2], Arjen Joosse[2], Carla Baan[2], Jan von der Thüsen[2], Ron Van Schaik[2], Ron Mathijssen[2], Astrid Van der Veldt[2], Dennis Hesselink[2]
[1]Erasmus MC, University Medical Center Rotterdam; [2]Erasmus MC, University Medical Center Rotterdam

Background: Transplant rejection during immune checkpoint inhibitor (ICI) treatment for cancer in solid organ transplant (SOT) recipients is a clinical problem. Donor-derived cell-free DNA (dd-cfDNA) can be detected in blood and is a sensitive biomarker for the diagnosis of acute rejection in SOT recipients. To our best knowledge, this is the first case report of a kidney transplant recipient with advanced cancer treated with ICI who was monitored with dd-cfDNA.
Case presentation: A 72-year old female with a long-standing renal transplant was diagnosed with advanced melanoma in 2018 and was treated with the anti-PD1 antibody nivolumab. Within 12 days after first administration of nivolumab, the dd-cfDNA ratio increased to 23%, suggesting allograft rejection. Her kidney transplant function deteriorated and acute rejection was confirmed by renal transplant biopsy. As the rejection could not be controlled, despite immunosuppressive treatment, a transplant nephrectomy was necessary and haemodialysis was started. Immunological analysis of the renal explant showed infiltration of alloreactive, nivolumab-saturated, PD1 + cytotoxic T cells. After transplant nephrectomy, she experienced nivolumab-related toxicity and rapid disease progression.
Conclusion: Clinicians prescribing ICIs should be aware of the risk of kidney allograft rejection as a result of T cell activation and should consider sensitive biomarkers such as dd-cfDNA for early detection of rejection.

PO083 LIVER DONORS WITH METABOLIC DISTURBANCES CAN EXTEND THE DONOR POOL

Indrė Vasiliauskaitė[1], Marjolein van Reeven[1], Sarwa Darwish Murad[2], Wojciech G. Polak[1], Ron de Bruin[1], Jan N.M. IJzermans[1]
[1]Department of Surgery, division of HPB and Transplantation Surgery, Erasmus MC University Medical Center Rotterdam; [2]Department of Gastroenterology and Hepatology, Erasmus MC University Medical Center Rotterdam

Introduction: Donor metabolic status is known to affect the survival of liver transplant (LT) recipients. Currently, the prevalence of donors with metabolic disturbances is increasing and expanding the disease affected donor pool. Our aim was to determine if the donor metabolic characteristics affect the long-term outcome after LT.
Methods: Data from recipients who underwent full-size LT in a single transplant center between 2007 and 2011 and their respective donors were collected. Using Kaplan-Meier, and Cox Proportional hazard regression analysis the effect of donor obesity, hypertension, dyslipidemia, steatosis, smoking, and alcohol abuse, as well as important non-metabolic factors, such as warm ischemia time (WIT) on graft and patient survival, was analyzed.
Results: A total of 211 LT were performed and 10 donors had at least one or more deviant metabolic values. The 1-, 5- and 10-year overall graft survival was 79%, 60%, and 47%. Patient survival was 85% at year 1, 69% at year 5 and 56% at year 10 post-transplantation. In multivariable analysis, donor hypertension ($p = 0.448$), dyslipidemia ($p = 0.434$), steatosis grade (10–20% $p = 0.404$, 20–33% $p = 0.984$, >33% $p = 0.854$), smoking ($p = 0.505$) or alcohol abuse ($p = 0.574$) had no significant effect on patient survival. Similar results were seen for graft survival. In all models, independent risk factors for graft survival were donor obesity and WIT. For patient survival, none of the covariates were independent risk factors.
Conclusion: These results suggest that recipient survival after LT is not influenced by donor metabolic factors, such as hypertension, dyslipidemia, steatosis or smoking and alcohol abuse. Our data suggest that the donor pool can be safely expanded using donors with metabolic disturbances.

PO086 DONOR GENDER AND RECIPIENT OUTCOMES AFTER KIDNEY TRANSPLANTATION: A POPULATION COHORT ANALYSIS FROM THE UNITED KINGDOM

Georgia Morgan[1], Zahrah Goolam-Mahomed[1], James Hodson[2], Jay Nath[3], Adnan Sharif[3]
[1]University of Birmingham; [2]Department of Medical Statistics, UHB; [3]Department of Nephrology and Transplantation, UHB

Introduction: Prior studies exploring the effect of donor-recipient sex mismatch in kidney transplantation have been inconclusive. This may reflect the heterogeneous nature of cohorts analysed and time-varying nature of published studies. In addition, many studies report data from the US, whose graft outcomes are incomparable to the UK. We aim to explore the impact of donor-recipient sex matching on transplant outcomes in a UK population-based cohort analysis.
Methods: We analysed all deceased kidney-alone transplants between 2000 and 2016 using data from the UK Transplant Registry. Demographic factors were compared between recipient sexes. The data were then divided by recipient sex and a range of demographic factors and patient outcomes were compared between donor sexes. Multivariable analyses were performed to assess whether donor sex was a significant independent predictor of recipient outcomes after accounting for confounding factors.
Results: Data were available for 25,140 transplants. Of these, 13,414 (53.4%) used male donors and a total of 15,690 (62.4%) recipients were male. Neither patient nor graft survival differed significantly between donor sexes on univariable or multivariable analyses. However, rates of initial graft dysfunction were significantly lower with female donors, with adjusted odds ratios of 0.89 (95% CI: 0.80–0.98, $p = 0.019$) in male recipients and 0.81 (0.71–0.93, $p = 0.003$) in female recipients. Donor sex was also a significant independent predictor of one-year creatinine levels. Male recipients of female donors had creatinine levels that were, on average, 6.3% (95% CI: 4.8%–7.7%, $p < 0.001$) higher than recipients of male donors, with a similar difference of 4.1% (95% CI: 2.1%–6.1%, $p < 0.001$) observed within female recipients.
Conclusion: Donor-recipient sex mismatch did not significantly affect patient or graft survival. However, female donors were associated with higher recipient creatinine levels but reduced risk of initial graft dysfunction.

PO087 LIVER GRAFTS WITH MAJOR EXTENDED DONOR CRITERIA – A USEFUL ALTERNATIVE FOR PATIENTS WITH HEPATOCELLULAR CARCINOMA

Vladimir J. Lozanovski, Larissa T.B. Kerr, Elias Khajeh, Omid Ghamarnejad, Rebecca von Haken, Thomas Longerich, Karl Heinz Weiss, Oliver Strobel, Arianeb Mehrabi
Heidelberg University

Introduction: Liver steatosis of > 40%, donor age of > 65 years and cold ischemia time of > 14 h are the major extended donor criteria (maEDC) that influence graft and patient outcome after liver transplantation (LT). Despite organ shortage, maEDC organs are often discarded. An allocation algorithm was proposed that balances the number of maEDC with the recipient's condition and states that grafts with more than one maEDC could be allocated to low-risk LT candidates (labMELD < 20) and/or patients with hepatocellular carcinoma (HCC) and liver cirrhosis. We investigated the outcomes of maEDC organ LT in patients with HCC.
Methods: Risk factor analysis was performed for early allograft dysfunction (EAD), primary non-function (PNF), 30-day and 90-day graft failure, and 30-day, 90-day and 1-year patient mortality for all HCC LT patients who were

eligible for analysis. The labMELD score was calculated to assess the recipient's condition objectively with a cut-off value of 20.
Results: EAD, PNF, and 30-day failure rates did not differ, but 90-day graft failure was higher in recipients of two maEDC organs. Recipients of no-maEDC grafts had higher 1-year graft survival whereas 1-year patient survival did not differ between the recipients of no-maEDC and maEDC organs. The rate of major morbidity (Clavien–Dindo ≥ IIIb) did not differ between recipients of no-maEDC and maEDC grafts (40.4% vs. 45.6%; $p = 0.068$). Also, the multivariate analysis revealed no association between maEDC grafts and 1-year patient mortality. Graft survival differed between the recipients of no-maEDC and maEDC organs after correcting for a labMELD score with a cut-off value of 20 and patient survival did not. Patient survival did not differ between recipients who did and did not meet the Milan criteria and who received grafts with and without maEDC.
Conclusion: maEDC grafts may be a useful alternative for patients with HCC who are waiting for LT and might reduce the drop-out from the waiting lists.

PO088 EXTERNAL VALIDATION OF THE DCD-N SCORE AND A LINEAR PREDICTION MODEL TO IDENTIFY POTENTIAL CANDIDATES FOR DONATION AFTER CIRCULATORY DEATH: A NATION-WIDE COHORT STUDY

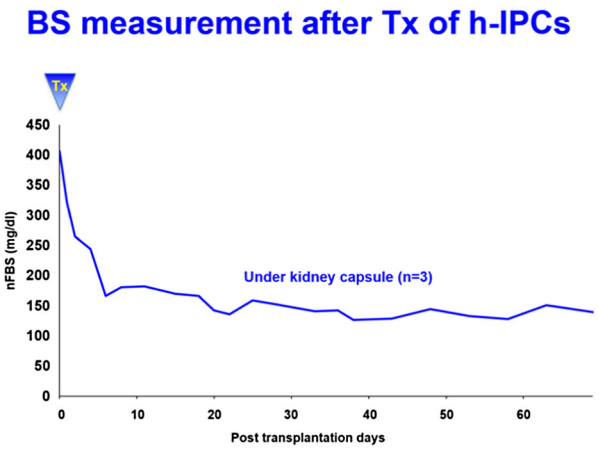
Maaike Nijhoff[1], Robert Pol[1], Angela Kotsopoulos[2], Hans Sonneveld[3], Jacqueline van Dongen[4], Farid Abdo[5], Vera Silderhuis[6], Cyril Moers[1]
[1]Surgery, University Medical Center Groningen; [2]ICU, Elisabeth TweeSteden Hospital, Tilburg; [3]ICU, Isala Hospital, Zwolle; [4]ICU, Catharina hospital, Eindhoven; [5]ICU, Radboud University Medical Center, Nijmegen; [6]ICU, Medisch Spectrum Twente, Enschede, Netherlands

Background: Donation after circulatory death (DCD) is a controlled procedure after planned withdrawal of life-sustaining treatment (WLST). In more than 20% of potential DCD donors the agonal phase exceeds the acceptable limit and the donation procedure is cancelled. Therefore, identification of patients who will die within 60 min after WLST is crucial. The aim of this study was to externally validate two existing prediction models using one of the largest cohorts.
Methods: This multicenter retrospective study analyzed all patients who underwent WLST from 2010 to 2015. The first model used a scoring system (DCD N-score), in which points are attributed to absence of neurological reflexes and an oxygenation index (OI). The second model, a linear prediction model (LPDCD), yielded the probability of death within 60 min and used OI as categorical variable. We determined the discrimination (c-statistic) and calibration (HL test) of these models.
Results: We included 394 patients, of whom 284 (72%) died within 60 min after WLST. The DCD-N score had a c-statistic of 0.81 (95% CI 0.74–0.88) and the LPDCD model 0.78 (95% CI 0.70–0.85). Calibration of the LPDCD model proved to be poor (HL-test $p = 0.02$).
Conclusion: Both the DCD-N score and the LPDCD model showed good discrimination, but poor calibration for the prediction of the probability of death within 60 min. Hence, construction of a new prediction model on a large data set is needed to obtain better calibration.

PO090 THE POTNETIALLY CLINICAL APPLICATION OF XENO-ANTIGEN FREE DIFFERENTIATION PROTOCOL FOR INSULIN-PRODUCING CELLS USING HUMAN RECOMBINANT PEPTIDE PETALOID M-PIECE FROM ADIPOSE-TISSUE DERIVED MESENCHYMAL STEM CELL

Tetsuya Ikemoto, Mitsuo Shimada, Yu Saito, Rui Feng, Shinichiro Yamada, Shu-ichi Iwahashi, Yuji Morine, Satoru Imura
Tokushima University

Background: We aimed to develop an effective and concrete protocol for generating insulin-producing cells (IPCs) from adipose-derived mesenchymal stem cells (ADSCs). We established 3D culture with RCP piece and xeno-antigen free protocol through our 2-step creation method that can be employed for the clinical application.
Methods: ADSCs were seeded in 96-well dishes and cultured in DMEM/F12 medium containing 1% human albumin, 1% B27 supplement, 1% N2 supplement, 50 ng/ml human activin A, and 10 nM exendin-4 for step one of differentiation with/ without 0.2 mg/uL RCP piece (7 days). Then 10 mM nicotinamide and 50 ng/ml human hepatocyte growth factor, with or without 1 mM histone deacetylase inhibitor, were added for step two of differentiation with/ without 0.2 mg/uL RCP piece (14 days). Cell quality, morphologic status and in vivo effects for streptozotocin induced diabetic mice were investigated.
Results: Our new xeno-antigen free and 3D culture protocol can generate IPCs strongly stained with Dithizon and anti-insulin antibody at day 21. MAFA expression was significantly high in 3D compared to that in conventional culture ($p < 0.05$). These IPCs had microstructures resembling insulin secretory granules by electron microscope. Stimulation index showed reasonable value compared to conventional culture ($p < 0.01$, maximum SI value was 4.9), and blood glucose levels were converted within normal limits after 14 post-transplant days when IPC transplanted under kidney capsule ($n = 4$) or intra-mesentrium ($n = 3$, $p < 0.05$) up to 70 days. Transplanted IPCs were stained with anti-inulin antibody at 7 days post-transplant.
Conclusions: Our xeno-antigen free and 3D culture method can be lead to the clinical application due to the proven effectiveness in vitro and in vivo.



High nFBS was converted to normoglycemia by h-IPC Tx in prompt sites.

PO092 SERUM MIR-33A IS ASSOCIATED WITH LIVER STEATOSIS AND INFLAMMATION IN LIVER TRANSPLANT RECIPIENTS

Denisa Erhartova, Monika Cahova, Irena Mikova, Eva Sticova, Julius Spicak, Pavel Trunecka
Institute for Clinical and Experimental Medicine

Background: The prevalence of non-alcoholic fatty liver disease (NAFLD) after liver transplant (LTx) is high but its long-term impact on post-transplant outcomes is unknown. Though liver biopsy is not needed to diagnose simple steatosis, it is still essential for diagnosis of inflammation and metabolic changes (ballooning) to distinguish between benign and progressive liver disease. However, liver biopsy is an invasive and expensive method. MicroRNAs are small non-coding RNAs involved in posttranscriptional regulation of gene expression, whose serum profiles correlate with mechanisms of underlying liver pathology in preclinical models.
Aims & Methods: The aim of the study was to evaluate the utility of miRNAs in non-invasive diagnosis of NAFLD in LTx recipients. Set of circulating miRNAs (miR-16, -33a, -34a, -106b, -122 and -192) was analysed in 116 patients who underwent post-transplant protocol liver biopsy. Relative expression of miRNAs, and standard clinical and laboratory data were used to construct model for prediction of NAFLD in liver graft.
Results: Relative expression of circulating miR-33a was significantly associated with steatosis and inflammation, two histological components of NAFLD. Further, miR-34a was significantly associated with inflammation, and miR-122 was associated with inflammation and ballooning. On multivariate logistic regression analysis, only miR-33a, along with markers of obesity and insulin resistance, was shown to be an independent predictor of steatosis and inflammation. ROC analysis demonstrated that the contribution of miR-33a to the prognostic model of steatosis and inflammation was limited in the context of clinical and biochemical variables.
Conclusion: Our data indicate that the relative expression of serum miR-33a is a statistically significant predictor of steatosis and inflammation in LTx recipients. Although statistically significant, the value of miR-33a was superseded by readily available clinical and laboratory variables.

PO094 SPONTANEOUS PANCREATICODUODENAL ARTERY BLEEDING AFTER DECEASED DONOR KTP

Jin Ho Lee[1], Hee Yeoun Kim[1], Dong Yeol Lee[1], Joon Seok Oh[1], Seong Min Kim[1], Yong Ki Park[1], Yong Hun Sin[1], Joong Kyung Kim[1], Seun Deuk Hwang[2], Joon Ho Song[2]
[1]Bong Seng Memorial Hospital; [2]Inha University College of Medicine

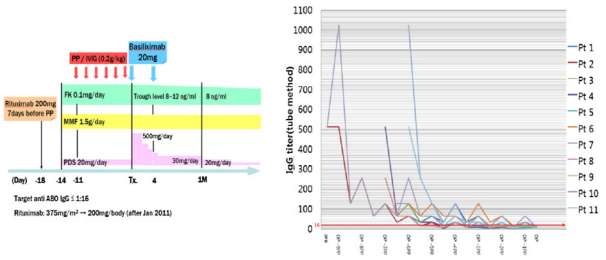
Introduction: Kidney transplantation (KTP) is the best treatment for end stage renal disease (ESRD) patients. In particular, in the absence of a donor, Deceased donor KT (DDKT) is the last hope for ESRD patients. However, mechanical and immunological complications may occur before and after

surgery. We report a case of spontaneously developed pancreaticoduodenal artery bleeding after DDKT and treated with embolization.
Case: A 58-year - old female patient underwent DDKT in December 17, while undergoing HD therapy with unknown ESRD. HLA showed 6/6 mismatch. Donor kidney was a single artery and vein and weighed 270 g. Total ischemic time was 393 min, immunosuppressant was basiliximab, prograf, MMF and MPDS. After transplantation, the patient showed a primary graft function by decreasing creatinine with increasing urine volume. On the 14th day, Hb decreased from 10.2 to 6.4, and the patient complained of epigastric pain, discomfort, and performed abdCT. CT images showed a suspicion of duodenal ulcer and/or perforation with a large hematomas (Fig.1). SMA angiography was performed to find the bleeding site after visiting the 3rd hospital. Angiography showed bleeding in the pancraticoduodenal artery (Fig.2). The embolization was performed by coiling at the bleeding site (Fig.3). No further hemorrhage was observed in the angiography, and the patient was discharged from the hospital without further Hb reduction.
Conclusion: We report a case of sudden onset pancreaticoduodenal artery bleeding successfully treated with coil embolization while recovering normal renal function after DDKT without trauma.

PO095 HIGH TITER OF ANTI A/B ANTIBODY IN ABO INCOMPATIBLE KIDNEY TRANSPLANTATION

Jin Ho Lee[1], Hee Yeoun Kim[1], Dong Yeol Lee[1], Joon Seok Oh[1], Seong Min Kim[1], Yong Ki Park[1], Yong Hun Sin[1], Joong Kyung Kim[1], Seun Deuk Hwang[2], Joon Ho Song[2]
[1]Bong Seng Memorial Hospital; [2]Inha University College of Medicine

Background: ABO incompatible (ABOi) KTP is effective way to reduce the shortage of living donor. In some studies, the presence of high titer of anti A/B Antibody was considered to contraindication for ABOi KTP. Because remained Anti-A and anti-B antibodies could cause antibody mediated rejection and result in poor long-term graft survival. With the development of desensitization therapy, 512 or more high titer ABOi KTP could perform successfully
Method: Eleven patients with end-stage renal failure underwent ABO-incompatible living kidney transplantation between June, 2009, and June, 2018. The mean age was 55.7 years (range, 28–57 years), with 4 males and 7 females. Incompatibility in ABO blood group antigens was as follows: A→O, 4 patients; B→O, 6 patients; A→B; 1 patient. The number of HLA mismatches were 2.18 ± 1.72. Baseline anti-A/B antibody titer was 577.16 (IgG, range; 512–1,024) and 192.72 (IgM, range; 8~512), titer was performed by tube method (Table 1). We tried plasmapheresis (PP) and IVIG for removal of the anti A/B antibodies before the kidney transplantation and the number of PP was 6.10 ± 0.98. We used Basiliximab, methylprednisolone for induction immunosuppressant (IS) and tacrolimus, mycophenolate mofetil, prednisolone for maintenance IS according to desensitization protocol (figure. 1).
Results: Mean follow-up duration was 41.9 months (range 3~75 months). We had one case (9%) of biopsy proven acute cellular rejection, and then we loss the graft despite of rescue therapy. There was no antibody mediated rejection episodes and all patients are alive.
Conclusion: Very high Anti A/B antibody titer (≥512, IgG, Isoaggluttinin tube method) in ABOi KTP shows excellent outcomes. Our results may expand the pool of living kidney donors, especially ABOi kidney transplantation donors.



PO097 TEMPORARY RENAL ARTERY CLAMPING WITH HEMOSTATIC MATERIALS IN DIFFUSE TYPE OF SPONTANEOUS RENAL ALLOGRAFT RUPTURE: A CASE REPORT

Samuel Lee
Kangdong Sacred Heart Hospital

Introduction: Several surgical strategies have been introduced for spontaneous kidney rupture. Herein, we report on a case in which temporary artery clamping with hemostatic materials was performed.
Case presentation: A 52-year-old man underwent renal transplantation from a living donor (his 20-year old son). Spontaneous allograft rupture occurred 6 days after transplantation. He developed severe abdominal pain, hypotension, and mental changes. His blood hemoglobin level was 3.6 g/dl, which was indicative of severe hemorrhage. Immediate re-exploration revealed a large hematoma in the iliac fossa and that the renal allograft had ruptured, with multiple fracture lines on the entire surface. Owing to diffuse surface rupture, surgical suture was not attempted. For manual compressive hemostasis, temporary artery clamping with hemostatic materials was performed. First, we identified the graft artery for temporary clamping, similar to the method in partial nephrectomy. Second, at the time of temporary clamping, the hemostatic matrix was sprayed on the surface of the renal graft. Third, we compressed the whole renal parenchyma with both hands and a dry pad for 5 min. After removing the clamp, successful bleeding control was confirmed. Finally, the graft was wrapped with oxidized cellulose. Renal biopsy in the operating room revealed the cause of rupture as acute rejection type IIB.
Conclusion: Spontaneous renal allograft rupture is a rare but serious complication. When surgical suture is not appropriate for the repair of the ruptured allograft, temporary artery clamping with hemostatic materials can be considered an alternative method.

PO098 CONSENSUS REPORT HIGH-URGENCY LIVER TRANSPLANTATION IN EUROTRANSPLANT FOR THE EUROTRANSPLANT LIVER AND INTESTINE ADVISORY COMMITTEE (ELIAC)

Markus Guba
University Hospital Munich

Emergency (high urgency) liver transplantation (ELT) offers a chance of survival for liver transplant candidates who cannot wait on the elective waiting list. In the Eurotransplant (ET) member states patients with accepted indications, i.e., acute liver failure, primary graft non-function, and hepatic artery thrombosis receive a high-urgency (HU) status, which internationally prioritizes these patients allowing for a timely (re)-transplantation. Although indications for ELT are internationally well accepted the criteria for the assignment of an HU status are not well defined. This manuscript provides an assessment of the currently employed HU criteria and summarizes the conclusions of a consensus conference of an international panel of ET HU auditors held in 2017. The results of the consensus aim to provide a basis international collaboration and organ sharing for ELT liver transplantation in the ET area.

PO099 THE COMPLEX PSYCHOLOGICAL ASPECTS OF SMALL BOWEL TRANSPLANTATION FROM A TEAM PERSPECTIVE: A CASE STUDY

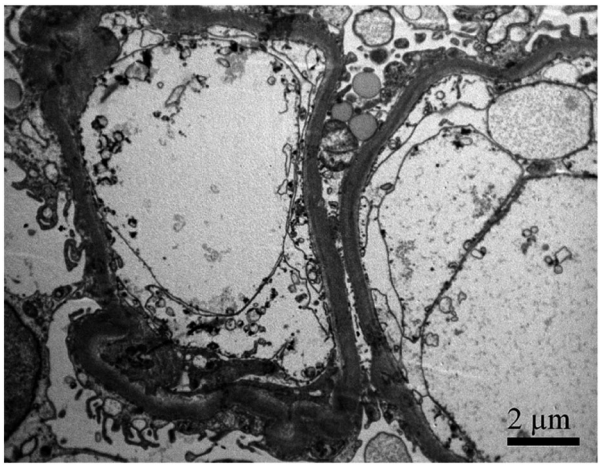
Dita Duijndam[1], Froukje Kooistra[2], Rodney Bilijam[2]
[1]University Medical Center Groningen; [2]University Medical Centre Groningen

Achtergrond: Het Universitair Medisch Centrum Groningen (UMCG) voert sinds 2001 kleine darmtransplantaties uit, als het enige ziekenhuis in Nederland. Deze case study betreft een 35-jarige Aziatische patiënt die op onze afdeling werd opgenomen voor een kleine screening op darmtransplantatie. In 2010 verwijderde de patiënt haar korte darm tijdens een psychotische episode. Ze had een traumatische jeugd, bleek slechte mentale vaardigheden te hebben, geen sociale contacten, basiskennis van de Nederlandse taal. Ze is mentaal stabiel op antipsychotica. De meeste teamleden hadden hun twijfels over transplantatiechirurgie voor deze patiënt, op basis van haar incompetentie en gebrek aan sociale contacten. Deze casestudy illustreert de moeilijkheid om te beslissen of een patiënt met multifactoriële problemen voor transplantatie al dan niet wordt geaccepteerd. Het doel van deze case study is het aantonen van het belang van een multidisciplinaire aanpak met gedeelde besluitvorming en frequent contact tussen professionals.
Methoden: Er vond een uitgebreide overdracht van patiëntgegevens plaats tussen het verwijzende ziekenhuis en het UMCG. Er was contact met professionals uit de revalidatiekliniek. Er werd een actieplan opgesteld en een morele beraadslaging onder leiding van een ethicus werd georganiseerd voor alle betrokken professionals. We bespraken alle problemen. Het feit dat de patiënt werd gesteund door de maatschappelijk werkers die haar motiveerden, veranderde de mening van het team over transplantatie: de patiënt werd als een geschikte kandidaat voor transplantatie beschouwd. Even belangrijk: ze was zelf gemotiveerd.
Resultaten: Deze patiënt werd begin 2019 getransplanteerd. We hadden dagelijks multidisciplinaire vergaderingen tijdens het verblijf van de patiënt op de afdeling. De patiënt doet het goed. Ze is tevreden over haar kwaliteit van leven.
Conclusie: De multidisciplinaire aanpak, bestaande uit veelvuldig contact tussen professionals, een morele beraadslaging en besluitvorming over delen, was succesvol. Elke complexe potentiële transplantatiekandidaat vereist een individuele benadering.

PO100 SEVERE ENDOTHELIAL INJURY OF DECEASED DONOR KIDNEY IS ASSOCIATED WITH EARLY GRAFT FAILURE

Željka Večerić-Haler[1], Martina Perše[2], Jerica Pleško[3], Nika Kojc[3]
[1]Department of Nephrology, University Medical Center Ljubljana; [2]Medical Experimental Center, Faculty of Medicine University of Ljubljana; [3]Institute of Pathology, Medical Faculty University of Ljubljana

Background: Although histological evaluation of pre-transplant donor kidney biopsy provides reliable information regarding cortical necrosis, vascular thrombosis, glomerulosclerosis and interstitial fibrosis/tubular atrophy, only electron microscopy (EM) enables thorough and reliable insights in microvasculature changes of kidney graft.
Methods: To get an insight into the endothelial cell alterations a blinded light and EM analysis was performed on 50 consecutive pre-transplant biopsies obtained from deceased donors after brain death. Early clinical course (6 months) after transplantation was evaluated.
Results: By light microscopy, all examined biopsies revealed similar mild to moderate acute tubular injury, glomeruli appeared unremarkable. EM showed similar features in 48/50 cases (glomerular and arteriolar endothelial cells appeared unremarkable or slightly swollen; peritubular capillaries had intact monolayer of basement membrane and were covered with normal endothelial cells without swelling or detachment). In all 48 cases there was no graft loss in 6-month-follow up. In contrast, 2/50 cases showed severe ultrastructural changes of renal microvasculature without significant changes in tubular epithelium. In one case the donor was exposed to long term extracorporeal membrane oxygenation (ECMO), in the other case the donor experienced Takatsubo cardiomyopathy, both grafts were lost in early post-transplant period (Figure)
Conclusion: Our results suggest that severe injury of renal microvasculature with relatively preserved tubular epithelium may be associated with some conditions of deceased kidney donors leading to early kidney graft failure. Further studies are needed to determine prognostic significance of severe ultrastructural microvasculature lesions and to evaluate disease states and conditions that could be associated with severe endothelial injury of kidney graft.



PO101 CLINICAL AND SOCIAL ASPECTS OF THE FAILING KIDNEY TRANSPLANT

Viktor Denisov, Vadym Zakharov, Eugene Onishchenko, Eleonora Komisarenko, Tatyana Golubova, Olga Zakharova, Svetlana Varybrus
Regional Hospital

Background: We evaluated the clinical and social aspects of the failing kidney transplant for better understanding the tasks for professionals.
Methods: Our Center performed 725 kidney transplants in 1986–2018. The cohort of 106 recipients who lived more than one year after kidney transplantation and returned to the dialysis treatment were studied. Irreversible late kidney allograft dysfunction constituted 80 % of the graft losses and 16.5% of dialysis pool. The patients were classified into rapid (19.4 $\pm$ 2.6 months) and comparatively slow (42.3 $\pm$ 0.8 months) mode of decline of graft function with the ratio 1:1.8.
Results: Significant clinical features in kidney recipients which returned to the hemodialysis treatment were low uremia tolerance, susceptibility to bruising, infection, poor controlled anemia, arterial dialysis hypotension. It was essential for this patients to come back to dialysis on achieving the plasma creatinine level up to 0.5–0.7 mmol/l. Late onset of hemodialysis took place in 64.2% cases, it reduced life expectancy by 2.6 times. Motives, social obligations and educational level of recipients, degree of psychological support of relatives and clinicians had great impact on patients' decision. The majority of patients would like to be included in the waiting list for re-transplantation but this was possible only in 50%, retransplantations were performed in 15 (14.2%) cases. In 4 (3.8%) cases a related donation took place both in the first and in the second transplantation. Patients survival and their quality of life improved. However, prognosis of subsequent grafts appeared to be poorer than that of the first transplants, with a maximum graft survival more than 29 years (monitoring continues) for the first versus 10 years for the fourth grafts.
Conclusion: Chronic allograft nephropathy is the important and specific source of dialysis patients. It require enhanced social support, timely return to dialysis treatment and retransplantation.

PO103 LOWER PLATELET COUNT AFTER ANTI-THYMOCYTE GLOBULIN INDUCTION IS ASSOCIATED WITH LOWER INCIDENCE OF HEART TRANSPLANT REJECTION

Bosko Skoric[1], Dora Fabijanovic[2], Ana Reschner[2], Jana Ljubas Macek[2], Maja Cikes[1], Jure Samardzic[1], Hrvoje Jurin[2], Hrvoje Gasparovic[3], Visnja Ivancan[4], Davor Milicic[1]
[1]University of Zagreb School of Medicine, Department of Cardiovascular Diseases, University Hospital Centre Zagreb; [2]Department of Cardiovascular Diseases, University Hospital Centre Zagreb; [3]University of Zagreb School of Medicine, Department of Cardiac Surgery, University Hospital Centre Zagreb; [4]University of Zagreb School of Medicine, Department of Anesthesiology, Resuscitation and Intensive Care Medicine

Background: Lymphodepletion during the induction with polyclonal anti-thymocyte globulin (ATG) is a therapeutic goal, while decrease in platelet count is deemed as an adverse event. However, the antiplatelet effect may represent an important part of ATG anti-rejection mechanisms that is not related to lymphodepletion.
Methods: We performed a retrospective single-centre study in heart transplant (HTx) patients transplanted between January 2010 and April 2017. Patients received rATG induction therapy for 5 days. In the first week after transplantation total lymphocyte and platelet counts were assessed daily, and later on, weekly. The incidence of cellular-mediated rejection (ACR) was monitored for one year after transplantation. Significant rejection was defined as ACR of grade $\geq$ 1B.
Results: A total of 150 patients (77.3% were male, mean age 56 yr) were transplanted. During the first year after HTx, 21.7% of patients had ACR $\geq$ 1B. Both total lymphocyte and platelet counts decreased rapidly after the introduction therapy in the entire cohort. Patients with ACR $\geq$ 1B had significantly higher both platelet (140 x103/μL (95–162) versus 103 (68–136), $p = 0.007$) and lymphocyte counts (219 x103/μL (104–347) versus 118 (76–221), $p = 0.015$) on the 7th day after HTx. Higher platelet count on day 14th was also related to ACR grade $\geq$ 1B (230 x103/μL (181–321) versus 189 (138–253), $p = 0.033$). There was no correlation between lymphocyte and platelet counts both in the patient group with rejection $\geq$ 1B (Pearson correlation coefficient = 0.139, $p = 0.518$) or in the patient group without significant rejection (Pearson correlation coefficient = 0.049, $p = 0.671$).
Conclusion: Decrease in platelet count following the induction with rATG was strongly related to lower grade of graft rejection, but this was not related to its lymphodepleting effect. This may indicate the platelet involvement in anti-rejection mechanisms of ATG, and a possible rationale for targeting platelets in future immunosuppressive strategies.

PO104 DIAGNOSIS, CLINICAL MANAGEMENT AND LONG-TERM FOLLOW UP OF CRIMYNE SYNDROME AFTER LIVER TRANSPLANTATION

Marco Maria Pascale, Erida Nure, Giuseppe Bianco, Antonio Franco, Francesco Frongillo, Salvatore Agnes
UCSC

CRIMYNE (CRitical Illness Myopathy and Neuropathy) is an acronym standing for both sensitive and motor axonal polyneuropathy.In literature single clinical entities have an incidence of 43–49% in patients with sepsis, multiple organ failure or prolonged ICU stay but their combination is less frequent depending on examined population and level of patient collaboration. Its predisposing factors are: corticosteroids; hydoelectrolytic alterations; malnutrition.Clinical presentation is characterized by variable weakness and impossibility to elimination of mechanical ventilation. It can be diagnosed with neurophysiological tests, as electroneuromyography (ENMG) and can be treated with specific physical rehabilitation plan. The success is directly proportional to precociousness of diagnosis and subsequent treatment. We present two cases of CRIMYNE after liver transplant at Transplantation Unit of"A. Gemelli" Foundation in Rome. A 46-year-old man come to emergency room after a car accident. He stayed in ICU with the need of tracheostomy and after three abdominal surgical procedures he suffered from acute liver failure and he underwent emergency liver transplant. During the subsequent stay in ICU, he presented CRIMYNE syndrome diagnosed with clinical evaluation and

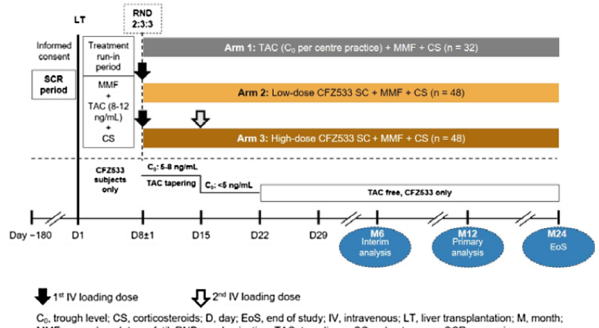
ENMG.He was treated with a specific physioteraphy plan after hepatic stabilization.A 65-year-old man underwent liver transplant with a diagnosis of decompesanted cirrhosis with dismetabolic etiology.After a long stay in ICU for infectious and haemodinamic reasons, patient presented weakness, generalized insensivity and paralysis.In this case CRIMYNE was recognized early, with quick application of a physiotherapeutic plan determining a complete resolution of neurologic status before of dismission.After a follow up of 20 and 8 months from CRIMYNE diagnosis, respectively, patients don't present neurologic alteration.CRIMYNE is a rare syndrome but timing in diagnosis and treatment is fundamental for short and long term neurologic outcomes.

PO105 EFFICACY, SAFETY, PHARMACOKINETICS AND PHARMACODYNAMICS OF THE ANTI-CD40 MONOCLONAL ANTIBODY ISCALIMAB (CFZ533) IN DE NOVO LIVER TRANSPLANT RECIPIENTS: RATIONALE AND DESIGN OF THE CONTRAIL I STUDY

Stuart J. Knechtle[1], Faouzi Saliba[2], Björn Nashan[3], El-Djouher Martzloff[4], Pascal Espie[4], Antonio Speziale[4], Sandy Feng[5]
[1]Duke University School of Medicine, Durham, NC; [2]Centre Hépato-Biliaire, Hôpital Paul Brousse, Villejuif; [3]University of Science and Technology of China, Hefei, Anhui; [4]Novartis Pharma AG, Basel; [5]University of California San Francisco, San Francisco, CA,

Background: Development of calcineurin inhibitor (CNI)-sparing regimens that can provide long-term renal and other benefits while preserving antirejection efficacy remains a key unmet medical need in liver transplantation (LT). CFZ533 (iscalimab), a fully human anti-CD40 monoclonal antibody, has been shown to prolong allograft survival in preclinical models and block T cell-dependent antibody responses in humans. Here, we present the rationale and design of CONTRAIL I, a phase 2 study evaluating the efficacy, safety, pharmacokinetics (PK) and pharmacodynamics (PD) of 2 CFZ533 dosing regimens as CNI-free arms versus standard tacrolimus (TAC) arm in *de novo* LT recipients (LTRs).
Methods: CONTRAIL I (NCT03781414) is a 12-month (M), multicenter, open-label study with a 12M follow-up period. *De novo* LTRs aged 18–70 years receiving grafts from deceased donors with estimated glomerular filtration rate (eGFR [MDRD-4]) ?30 ml/min/1.73 m^2 will be randomized (2:3:3) on Day 8 ± 1 post-LT to TAC control, low-dose CFZ533, or high-dose CFZ533 arms (**Figure**). All patients will receive mycophenolate mofetil and steroids from LT to M24. The primary objective is to evaluate the rate of composite efficacy failure (biopsy-proven acute rejection [BPAR; rejection activity index ?3], graft loss, or death) at M12. Key secondary objectives will include efficacy event rates, renal function (evolution of eGFR and change from randomization), safety, and tolerability (incidence of adverse events [AEs], serious AEs, and study and treatment discontinuation), and PK and PD (soluble CD40 in plasma) of CFZ533 over 12M and 24M.
Results: At least 128 LTRs will be randomized from multiple centers in Europe and North America. The first patient first visit is planned for Q3 2019 and study completion is expected by Q4 2022.
Conclusions: The study findings will identify the CFZ533 dose for further clinical development and inform the safety and efficacy of CFZ533 as a CNI-free regimen in *de novo* LTRs.

Figure. Design of CONTRAIL I study



C0, trough level; CS, corticosteroids; D, day; EoS, end of study; IV, intravenous; LT, liver transplantation; M, month; MMF, mycophenolate mofetil; RND, randomization; TAC, tacrolimus; SC, subcutaneous; SCR, screening

PO106 CORRELATION BETWEEN THE HLA ANTIBODY SCREENING TEST AND THE SPECIFICITY IDENTIFICATION TEST

Kohei Unagami, Miyuki Furusawa, Yoichi Kakuta, Daisuke Toki, Kazuya Omoto, Tomokazu Shimizu, Masayoshi Okumi, Kazunari Tanabe, Hideli Ishida, Kosaku Nitta
Tokyo Women's Medical University Hospital

Management of kidney transplantation (KTx) involves monitoring of the levels of donor-specific antibody (DSA), as it indicates the development of antibody-mediated transplant rejection. Since April 2018, the screening test for HLA antibody for organ transplant recipients to prevent transplant rejection was covered by the national insurance scheme of Japan. Thus, an increase in the number of cases for screening tests is expected. However, the correlation between the HLA antibody screening test and the specificity identification test is unclear. Hence, we investigated this correlation in candidates intended for KTx.

Hence, we investigated this correlation in candidates intended for KTx. Total 73 candidates intended for KTx were enrolled. All candidates were screened for anti-HLA antibodies, using LABScreen Mixed® and LABScreen single antigen® specificity identification tests.

The result was shown in Table1. In the HLA screening test, the sensitivity was 64.5% for class I HLA and 64.0% for class II HLA, and specificity was 81.0% for class I HLA and 77.1% for class II HLA (PLR, 3.39 and 2.79; NLR, 2.79 and 0.47, respectively). False-positive cases were identified in low mixed ratio titers such as 1.5–1.7. Furthermore, false-negative cases suspected with autoantibodies, DP antibodies were identified.

The presence of de novo DSA (dnDSA) reportedly depends on the duration after KTx; hence, supposing (a) 10% and (b) 20% as the dnDSA prevalence, for instance, positive predictive values would be low {(a) 27.4% (Class I), 23.7% (Class II) and (b) 45.9% (Class I), 41.4% (Class II)} 5 and 10 years after KTx, although, negative predictive values would be high {(a) 95.4% (Class I), 95.1% (Class II) and (b) 90.1% (Class I) 89.5% (Class II)}. Therefore, the HLA screening test is applicable to prevent dnDSA development. These data further the current understanding of the characteristics of these tests, with potential utility.

Class Ⅰ (n=73)	Screening test		
Specificity Identification test		Positive	Negative
	Positive	20	11
	Negative	8	34

Class Ⅰ
sensitivity: 64.5%
specificity: 81.0%
positive likelihood ratios: 3.39
negative likelihood ratios: 0.44

Class Ⅱ (n=73)	Screening test		
Specificity Identification test		Positive	Negative
	Positive	16	9
	Negative	11	37

Class Ⅱ
sensitivity: 64.0%
specificity: 77.1%
positive likelihood ratios: 2.79
negative likelihood ratios: 0.47

PO107 CLINICAL OUTCOMES IN KIDNEY TRANSPLANTATION WITH MYCOPHENOLATE MOFETIL MAINTENANCE IMMUNOSUPPRESSION IN CHINA: A REAL-WORLD STUDY OF THE CHINESE SCIENTIFIC REGISTRY OF KIDNEY TRANSPLANTATION DATABASE

Liping Chen, Hongwei Bai, Hailong Jin, Tianyu Zhang, Bingyi Shi, Ming Cai
8th Medical Center of the Chinese People's Liberation Army General Hospital

Background: Understanding the outcomes of patients receiving mycophenolate mofetil (MMF)-based immunosuppression after donation after cardiac death (DCD), donation after brain death followed by circulatory death (DBCD), and living donor (LD) kidney transplantation is desirable.
Methods: A real-world retrospective study was conducted, including patients received MMF as the IS regimen firstly after kidney transplantation in 41 large centers of Chinese Scientific Registry of Kidney Transplantation (CSRKT) from January 2010 to December 2016. Graft survival, patient survival, graft function, the incidence of delayed graft function (DGF), biopsy-proven acute rejection (AR), and infection were analyzed. Risk factors associated with graft loss were also investigated.
Results: A total of 6,719 patients were analyzed, including 1,153 (17.2%) DCD, 1,271 (18.9%) DBCD and 4,295 (63.9%) LD patients. The median follow-up time was 571, 640 and 1,461 days, and the 3-year graft survival rates were 91.6%, 91.1% and 95.8% in the DCD, DBCD and LD groups, respectively. The incidence of DGF in DCD (19.4%) and DBCD (18.3%) were comparable but significantly lower in the LD group (2.4%; $p < 0.05$). Compared with the

deceased donor group, the LD group had significantly ($p < 0.05$) lower incidence of infection (10.73% vs. 20.63%), graft loss (1.14% vs. 3.47%), and patient death (1.21% vs. 3.51%), but comparable AR incidence (3.98% vs. 5.49%) in the first year postoperatively. Independent risk factors for graft loss within 1 year postoperatively were DGF (HR, 6.9; 95% CI:, 4.1–11.4), AR (HR, 3.1; 95% CI: 1.7–5.7), serum creatinine level > 1.5 mg/dl (HR, 2.3; 95% CI: 1.1–4.5), and hyperuricemia (HR, 1.7; 95% CI: 1.1–2.8).
Conclusion: Renal transplantation recipients with MMF-based IS regiment from DCD, DBCD and LD had good survival in a real-world setting in China. Deceased donor, DGF, AR, hyperuricemia, and serum creatinine levels > 1.5 mg/dl increased the risk of graft loss 1-year postoperatively.

PO109 MANAGEMENT OF TREATMENT IN ANASTOMOTIC BILIARY STRICTURES AFTER DECEASED DONOR LIVER TRANSPLANTATION

Vadym Mezhybovsky, S. Eisner, M. Gurenich, V. Tannek, R. Ghinea, A. Nesher, E. Mor
Department of Organ Transplantation, Rabin Medical Center, Belinson Hospital, Petah Tikva, Israel

Background: Anastomotic biliary strictures (ABS) are well-recognized complication after liver transplantation that may shorten graft survival. In the arsenal of treatment of ABS there are the minimally invasive approaches such as endoscopic retrograde cholangiography (ERCP) and percutaneous transhepatic cholangiography (PTC) or surgical revision by conversion to Roux-en-Y hepaticojejunostomy. Unfortunately, the treatment in most cases are extended, expensive, and demand recurrent hospitalizations with a high rate of morbidity and mortality.
Objective: To determine the outcomes of different procedures included ERCP, PTC, and surgery for ABS.
Patients: We reviewed data of 508 liver transplantations performed between 2000 and 20018 excluding 90 transplants (60 live donor or a split graft and another 30 combined transplants) and also ischemic type intrahepatic strictures ($n = 16$). Of the 402 transplants 43 patients (10.7%) developed ABS after duct-to-duct biliary anastomosis. We looked at the type of procedure (ERCP, PTC or surgery), mean interval of diagnosis, number of procedures and success rate as maintaining long-term graft function.
Results: The mean interval for diagnosis of ABS was 53.3 + 8.7 days post-transplant. Mean number of procedures was 3.9 (1–12) per patient. ERCP was performed first in 27 patients with a success rate of 29.6% (8 patients), another 9 went on to do PTC; 5 of whom who failed PTC underwent surgery with good results; 3 of them died between 2–5 years after surgery. Another 7 patients underwent surgery after ERCP, and all are alive. PTC was the initial procedure in 14 patients of whom 4 (28.5%) had a complete resolution; one patient died 3 months lat

PO110 THE ROLE OF JUDICIAL AUTHORITIES IN ORGAN TRANSPLANTATION AFTER DEATH: A CASE ANALYSIS

Hazel Ateş[1], Rahime Erbaş[1], Serdar Talas[1], Yazgülü Taşdemir[1], Devrim Öztemel[2], Coşkun Yorulmaz[3]
[1]Istanbul University, Faculty of Law; [2]Koc University; [3]Istanbul Cerrahpaşa University, Faculty of Medicine

Background: Organ transplantation from the deceased organ donor is essential as it enables taking organs such hearth or pancreas that cannot be provided through a living donor. Besides, it entails more difficulties particularly in emergencies and timing. When a death case is considered suspicious or obscure and judicial authorities get involved where the difficulties come to surface more clearly. In such a case, organ transplantation has three mating sides: medical, forensic medical and judicial. Whereas medicine is focused on organ's eligibility to transfer, the scope of forensic medicine lies on setting forth the causes of death. As for law, it possesses the leading role by its purpose of finding material truth in criminal procedure. This study indicates the conditions under which judicial authorities render organ transplantation possible.
Material: In a case of study from Turkey, a 24-year-old taxi driver was shot in the head by his customer and after three days a diagnosis of brain death was made.The case is obviously a suspicions homicide case and hence concerning criminal investigation where the public prosecutor has a full authority.Therefore, in order to save life of seven or eight people the hospital asked the prosecutor to issue permission for transplanting organs before autopsy by providing information that organ transplantation do not cause any loss of evidence as the cause of death has been already determined. The prosecutor issued permission, but by mandating certain conditions.
Results: A legal loophole exists in allowing organ transplantation after death in suspicious cases. Hence, it lays on the discretion of judicial authorities performed by basing on the certain conditions varying from case to case.
Conclusion: The judicial authorities in life saving is of a vital importance which conceals and some conditions shaped by the application of prosecutor's discretion. A necessity to create a system for standardization from medical and judicial perspective.

PO111 INDIVIDUALIZED OPTIMIZATION OF POSTTRANSPLANT HEPATITIS B PROPHYLAXIS WITH HEPATITIS B IMMUNOGLOBULIN USING PHARMACOKINETIC HALF-LIFE SIMULATION

Yong-Kyu Chung, Shin Hwang, Chul-Soo Ahn, Deok-Bog Moon, Tae-Yong Ha, Gi-Won Song, Dong-Hwan Jung, Gil-Chun Park, Young-In Yoon, Sung-Gyu Lee
Asan Medical Center

Background: Prophylaxis for hepatitis B virus (HBV) recurrence is essential after liver transplantation (LT) in HBV-associated recipients. This study established an individualized HBV prophylaxis protocol, through optimization of hepatitis B immunoglobulin (HBIG) administration, with the application of simulative half-life (SHL).
Methods: This study involved five parts: Part 1 developed the SHL estimation method with 20 patients; Parts 2 and 3 assessed the SHL variability and developed a simulation model to apply SHL in 100 patients; Part 4 validated the simulation model in 114 patients, and Part 5 was a cross-sectional study on the current status of HBIG infusion intervals in 660 patients.
Results: In Part 1, infusion of 10,000 IU HBIG induced add-on rise anti-HBs titer of 5,252.5 $\pm$ 873.7 IU/L, and mean SHL of 20.0 $\pm$ 3.7 days were 4.4% lower and 2.2% longer than the actual measurements, respectively. In Part 2, the medians of the intra- and inter-individual coefficient of variation in SHL were 13.5% and 18.5%, respectively. Pretransplant HBV DNA load and posttransplant antiviral therapy did not affect SHL. In Part 3, a simulation model was developed to determine the interval of HBIG infusion, by using SHL. In Part 4, all 114 patients were successfully managed with regular HBIG infusion intervals of $\geq$ 8 weeks, and the interval was prolonged to $\geq$ 12 weeks in 89.4%, with a target trough anti-HBs titer $\geq$ 200 IU/L. In Part 5, 47.4% of our patients received HBIG excessively, at a target trough titer of 500 IU/L.
Conclusion: SHL estimation using only clinically available parameters seems to be reliably accurate when compared with actual measurements. We believe that SHL estimation is helpful to establish a personalized HBV prophylaxis protocol for optimizing HBIG administration.

PO112 SOLID ORGAN TRANSPLANTATION FOLLOWING ALLOGENEIC HAEMATOPOIETIC CELL TRANSPLANTATION: EXPERIENCE FROM A REFERRAL ORGAN TRANSPLANTATION CENTER AND SYSTEMATIC REVIEW OF LITERATURE

Jens G. Brockmann[1], Dieter C. Broering[2], Walid Rasheed[3], Shahrukh Hashmi[3], Imran Nizami[4], Jehad Alburaiki[5], Mohamed Shagrani[6], Tariq Ali[7], Mahmoud Aljourf[3]
[1]Department of General, Visceral and Transplant Surgery, University Hospital Münster; [2]Organ Transplant Center, KFSH&RC, Riyadh; [3]KFSH&RC, Department of Medical Oncology; [4]KFSH&RC, Lung Transplant Medicine; [5]KFSH&RC, Department of Cardiology; [6]KFSH&RC, Department of Paediatric Transplant Hepatology; [7]KFSH&RC, Department of Transplant Nephrology

Solid organ transplantation (SOT) following haematopoietic cell transplantation (HCT) is a rare event. Uncertainty exists whether such recipients are at higher risk of relapse of underlying haematological disease or at increased risk of developing infectious or immunological complications and malignancies following SOT.

The experience at our referral organ transplantation center and the present literature of SOT ($n = 198$) in recipients following previous HCT was systematically reviewed.

Outcome analysis of 206 SOT recipients following HCT challenges the validity of the frequently stated comparable outcome with recipients without prior HCT. SOT recipients after HCT are younger and have a higher mortality and morbidity in comparison with "standard" recipients. Rejection rates for SOT recipients following HCT appear to be lower for all organs, but for liver transplantation. In the setting of liver transplantation following HCT, mortality for recipients of deceased donor grafts appears to be exceptionally high, although experience with grafts of living donors are favourable. Morbidity was mostly associated with infectious and malignant complications. Of note some SOT recipients who received solid organ donation from the same HCT donor were able to achieve successful withdrawal of immune suppression. Despite limited follow-up, recipients with prior HCT show a different course after SOT, necessitating attention and closer follow-up.

PO113 CHARACTERISTICS OF DECEASED DONORS USED FOR KIDNEY TRANSPLANTATION: SINGLE-CENTER EXPERIENCE

Alparslan Ersoy[1], Ersin Elgin[2], Suat Akgür[1], Abdülmecit Yıldız[1], Onur Kaygısız[3], Rafet Oflaz[2], Kerem Selimoğlu[2], Ayşegül Oruç[1], Oktay Ünsal[1], Burhan Coşkun[3], Mehmet Fethullah Aydın[1], Sahriye Keskin[2], Yakup Kordan[3], Hakan Vuruşkan[3]

[1]Uludag University School of Medicine, Internal Medicine, Department of Nephrology; [2]OrganTransplant Center, Uludağ University Health Practice and Research Center; [3]Urology, Uludağ University Medical Faculty

Objective: Although the number of deceased organ donations is still low in our country, the rate in the Bursa region is in first place with 16.2 per one million population in 2017, whereas this rate was 7.0 in Turkey. This study aimed to investigate the characteristics of deceased donors used for kidney transplantation in our center.
Methods: We retrospectively examined the demographic and clinical features of deceased donors used for kidney transplantation between January 2007 to December 2017 in this single-center study.
Results: In the Bursa region, 1,276 brain deaths were diagnosed between 2008 and 2017 years. 38.1% (n = 487) of families agreed for donation. Our center used 332 (117 females, 215 males; 178 right and 154 left organ) deceased kidneys for kidney transplantation. The proportion of deceased donors of our center in 2017 was also higher than that of our country (53% vs. 20.7%). The mean age of donors was 45.8 ± 16.1 (11–87) years. The mean body mass indices of donors was 25.9 ± 4.2 (16.2–50) kg/m2. The mean hospitalization time of the donors in the ICU was 4.2 ± 3.8 (1–25) days. Trauma cases were found at 66 (19.8%) patients. The most frequent cause in non-traumatic cases with brain death was brain hemorrhages related with different causes (52.7%). Other causes were cerebral infarct (17.4%), suicide, encephalitis, pulmonary embolism, fulminant hepatitis and methyl alcohol intoxication. The blood groups of the donors were AB in 27, O in 54, B in 124 and A in 127. The cold ischemia time was 13.4 ± 2.6 (8–24) hours. The mean serum creatinine, hemoglobin and natrium levels of donors before organ harvesting were 1.45 ± 0.99 (0.31–6.8) mg/dl, 11.8 ± 2.4 (6.3–20) g/dl and 152 ± 13 (128–199) mEq/L, respectively. Median body temperature, systolic and diastolic blood pressures were 36.5 (34.2–40.3), 111 (80–180) and 65 (36–102) mmHg, respectively.
Conclusion: The recognition of brain death, donor care and family interview in ICU are important issues due to low organ donation.

PO114 ROMAN LIVER TX ALLOCATION: A NOVEL REGIONAL ALLOCATION MODEL FOCUSED ON MELDNA AND DONOR-RECIPIENT MATCH. RESULTS AT 5 YEARS

F. Ferracci[1], Q. Lai[2], T. Manzia[3], Valerio Giannelli[4], Antonio Franco[1], F. Melandro[2], Flaminia Ferri[2], M. Colasanti[4], F. Frongillo[1], R. Lionetti[4], M. Manuelli[3], I. Lenci[3], M. Rossi[2], G.M. Ettorre[4], G. Tisone[3], S. Agnes[1], A. Avolio[1]

[1]Department of Surgery - Transplantation Service, Fondazione Policlinico Univeritario A.Gemelli, IRCCS, Rome; [2]Umberto I, Rome; [3]PTV, Rome; [4]POIT, Rome

A new allocation model based on the rank of recipient MELDNa and donor age (MELDNa-DAGE allocation) was developed in a donor-to-recipient match perspective. 244 Liver transplant (LT) performed (2013–2015) in a 4 center regional consortium were compared to 235 historical (2010–2012) LT control (Center allocation). Center allocation was based on clinical parameters in each Center (rotation of offers). Kaplan Meier, Logistic Regression analysis, Cox Regression analysis and Competing Regression analysis were performed.

During 2013–2015, **S**tandard **O**rgans (**SO**, N = 151, 61.8%) were allocated to patients (pts) on a common regional waiting list, based on MELDNa (5 classes: **>30**, N = 32, 13.2%; **29–24**, N = 41, 16.8%; **23–20,** N = 19, 7.8%; **19–15**, N = 24, 9.8%; **<15**, N = 35, 14.3%). **Non-SO** (donor age > 65, N = 76, 31.2%; other reasons, N = 17, 6.9%) were allocated locally: each Center identified the best suitable pt (mainly HCC pts with progressive disease).

LT in 2013–2015 period were older, with higher MELDNa, and received organs by older donors. In not-HCC patients: Recipients' age: 52 ± 11 versus 50 ± 11, p = 0.2; Donors' age: 51 ± 18 versus 52 ± 18, p = 0.9; MELD at LT: 23 ± 7 versus 21 ± 7, p = 0.002; MELDNa at LT: 25 ± 7 versus 22 ± 7, p = 0.003. In HCC patients: Recipients' age: 58 ± 6 versus 57 ± 8; Donors' age: 56 ± 17 versus 52 ± 18; MELD at LT: 15 ± 6 versus 14 ± 6; MELDNa at LT: 16 ± 7 versus 15 ± 5, p = 0.2. Waiting time was significantly reduced for not-HCC group 2.0 ± 4.4 versus 6.7 ± 8.3 months, p = 0.0001, and unchanged for the HCC patients 5.7 ± 5.2 versus 5.3 ± 5 p = 0.5. Mean post-transplant follow-up was 29 ± 20 months.60 months' survival resulted unchanged (Kaplan-Meier univariate analysis: overall 76% vs. 79% p = 0.1; not-HCC: 78% vs. 80% p = 0.6; HCC: 73% vs. 77%). MELDNa, recipients' age, and MELDNa-DAGE allocation resulted significant prognostic predictors of patient survival.

The innovative allocation model provides unchanged survival results, using organs from older donors, and faster transplantation for pts with high MELDNa scores.

PO115 THE RECIPIENT OF 3RD LIVER TRANSPLANTATION AND 2 ALLOGENIC STEM CELL TRANSPLANTATIONS. ARE THERE LIMITS?

Krzysztof Mucha[1], Barbara Moszczuk[1], Krzysztof Zieniewicz[2], Jan Leruť[3], Piotr Remiszewski[2], Joanna Sańko-Resmer[1], Rafał Paluszkiewicz[2], Pierre Goffette[3], Bartosz Foroncewicz[1], Wojciech Figiel[2], Leszek Pączek[1]

[1]Department of Immunology, Transplantology and Internal Medicine, Medical University of Warsaw; [2]Department of General, Transplant and Liver Surgery, Medical University of Warsaw; [3]Institut de Recherche Clinique - Université catholique Louvain

Introduction: Recurrent cholangitis after liver transplantations (LT) is a serious problem. Proper antibiotherapy together with endoscopic interventions and adequate immunosuppression (IS) are the treatments of choice. Usually, at certain moment patients become resistant to any anti-infectious treatments and therefore need retransplantation (ReLT).
Case presentation: We present a 36-year young woman after LT in December 2005 due to an acute Budd-Chiari syndrome and ReLT at day 13 due arterial thrombosis. During the following years she developed myelofibrosis, treated with allogenic stem cell transplantation in 2015 and in 2016 due to hematopoietic insufficiency. Hematopoietic cell transplantations transformed her blood type from ARh+ to 0Rh+.

From 2015 onwards, she developed recurrent episodes of severe cholangitis treated with antibiotics and several endoscopic stentings. The frequency of cholangitis episodes raised further since June 2017 leading to resistance to all antibiotherapies. She was continuously hospitalized for intravenous anti-infectious treatment. Her immunosuppression (IS) consisted of infratherapeutic tacrolimus (TAC) monotherapy (trough levels ± 1 ng/ml only).

Taking into consideration all of the above (plus e.g.: thrombocytopenia, anemia, renal insufficiency with chronic kidney disease stage 4), finally a 3rd LT was performed. This reLT was complicated with a biliary fistula that needs interventional radiology. She is actually doing well under TAC (trough level ± 3.5 ng/ml) and 50 mg of azathioprine IS.
Conclusions: ReLT- despite its' inherent risks - is the only procedure that definitively treats cholangitis due to intrahepatic biliary tract lesions.

PO117 PROPOSAL OF A NOVEL LIVER TRANSPLANT SCORE FOR HEPATOCELLULAR CARCINOMA: THE AGMA SCORE

Georgios C. Sotiropoulos, Massimo Malago, Nikolaos Machairas, Ioannis Fouzas, Andreas Paul

Department of General Visceral and Transplantation Surgery, University Hospital Essen, Germany

Background: Hepatocellular carcinoma (HCC) in cirrhosis represents one of the leading indications for liver transplantation (LT). In an effort to expand the listing criteria, a variety of scoring systems have been suggested, mainly based on the tumor number/size criterion. The objective of our study was to evaluate the feasibility of proposing a transplant score for HCC excluding the tumor number/size criterion.
Methods/Materials: Data corresponding to transplanted HCC patients were reviewed for the purposes of this study. Deceased donor (DDLT) and living donor (LDLT) liver transplantations were included. Demographic, clinical and tumor-related parameters were evaluated. Uni- and multivariate regression analyses and survival analysis were performed.
Results: One hundred patients were included in the study. Fifty-five patients underwent DDLT, whereas 45 patients received LDLT. Tumor differentiation (G1/2 vs. G3), Alpha-fetoprotein levels (AFP), recipient age, and recipient laboratory Model for End-Stage Liver Disease Score (MELD) showed statistical significance. A scoring system was developed, with prognostic points assigned as follows: age ≤ 60 years:age > 60 years = 1:0 points, tumor grading well/moderate:tumor grading poor = 1:0 points, MELD score ≤ 22:MELD score > 22 = 1:0 points, and AFP level ≤ 400 ng/ml:AFP level > 400 ng/ml = 1:0 points. This stratification delineated three separate population samples corresponding to patients with scores of 4, 3, and 1–2, respectively. The calculated 5-year survival for scores 4, 3, and 1–2 was 76%, 47%, and 20%, respectively (p = 0.0001).
Conclusion: The AGMA score showed prognostic value in this single-center analysis and may find clinical implication avoiding the tumor number/size criterion.

PO118 LIVER TRANSPLANTATION FOR HEPATOCELLULAR CARCINOMA FOLLOWING TRANSARTERIAL RADIOEMBOLIZATION AS UNIQUE BRIDGING TREATMENT: OUTCOMES FROM A SYSTEMATIC REVIEW OF THE LITERATURE

Nikolaos Machairas[1], Anna Paspala[1], Paraskevas Stamopoulos[2], Zoe Garoufalia[2], Ioannis D. Kostakis[2], Georgios C. Sotiropoulos[2]
[1]3rd Department of Surgery, NKUA, Attikon University Hospital; [2]2nd Department of Propaedeutic Surgery, NKUA, Laiko General Hospital

Introduction: Transarterial radioembolization (TARE) is a loco-regional treatment available for primary and metastatic hepatic tumors including hepatocellular carcinoma (HCC). TARE has been successfully used for downsizing advanced stage tumors whereas it has an emerging role as an effective bridging treatment to liver transplantation (LT) for patients with previously deemed unresectable HCC**.** The objective of our study was to evaluate the efficacy of TARE as unique bridging modality to LT for patients with HCC.
Methods/Materials: A thorough search of the literature was performed and studies presenting patients with unresectable HCC and who were treated with TARE, as the only locoregional therapy, before LT were included. Studies with patients who had an additional method to TARE as a bridging strategy were excluded.
Results: Ten studies were finally included in our review, which comprised 260 patients. The majority of patients were treated with one intercourse of TARE and none other locoregional therapy before undergoing LT. The median follow-up periods of the included studies ranged from 15.8 to 48 months. Recurrence, as reported by 5 studies was diagnosed in 21 of 171 patients after LT (12.2%). The reported overall survival (OS) rates reported were 77–95% at 1 year, 27–84% at 3 years and 45%-67% at 5 years post-LT.
Conclusion: According to current bibliographic evidence, TARE seems to be a promising and efficient locoregional treatment in patients with advanced HCC awaiting LT.

PO119 ACUTE REJECTION DURING THE FIRST YEAR AFTER TRANSPLANT: INCIDENCE AND CLINICAL FACTORS ASSOCIATED

Ingrid Auyanet Saavedra, Yaiza Rivero, Rita Guerra Rodríguez, Ernesto Fernández Tagarro, Ana Ramírez Puga, Noemí Esparza Martín, Saulo Fernández Granados, Ana Cristina Ródenas Galvez, Elvira Bosch, César García Cantón
Hospital Universitario Insular de Gran Canaria

Background: Acute rejection (AR) is the immune response that causes deterioration in graft function and it determines the survival of the kidney graft in the medium to long-term. The aim of this study was to examine the incidence of AR, that has been confirmed by biopsy, the clinical factors associated and the survival during the first year after transplant (Tx).
Methods/Materials: Study including 295 renal transplants (mean age was 51.8 ± 11.6 years) during the period from 2007 to 2016 followed up until 2017.
Results: The incidence of AR was 15.6% (9.8% cellular and 7.8% humoral). 51.7% of cellular rejection was consistent with grade IIA (Banff 2013 Classification). 73.9% of humoral rejection did not have donor specific anti-HLA antibodies (DSA). Results of univariate analysis are shown in table 1 In multivariate analyses the delayed graft function and retransplantation were significant. However, doing a disaggregated analysis of cellular and humoral RA there were no statistically significant differences. Serum creatinine and proteinuria were greater in recipients with RA (1.75 vs. 1.5 mg/dl, $p = 0.004$; 0.59 vs. 0.31 g/24 h, $p = 0.001$) at one year follow up. No significant differences in graft or patient survival were found using Kaplan-Meier survival analysis.
Conclusion: The incidence of AR was 15.6% during the first year after Tx, similar to the data published in other studies. The AR is related to delayed graft function and retransplantation. Renal function and proteinuria were worse in RA at one-year. However, there were not significant differences in terms of survival graft or patient due to other related factors.

PO120 LESSON FROM ACUTE REJECTION CASES IN PANCREAS TRANSPLANT ALONE RECIPIENTS

ByungHyun Choi, Kwang Ho Yang, Jae Ryong Shim, Je Ho Ryu
Pusan National University Yangsan Hospital

Background: The outcome of pancreas transplant alone (PTA) is much lower than that of simultaneous pancreas and kidney transplant. The immunologic rejection is one of the biggest problem in PTA.
Method: We performed 32 cases of PTA since 2015. All cases of rejection were confirmed by pathologic findings. Clinical findings were analyzed in this study.
Results: Eight rejection episodes were observed. There was no significant difference parameter between non-rejection group and rejection group. Eosinophilia was a risk factor for acute rejection. Only three patients had been recovered from rejection without graft dysfunction. The other five patients had gone to re-transplant or graft failure. Non-elevation of amylase/lipase before rejection was risk factor to graft failure. It took about three months from diagnosis of rejection to glucose intolerance in graft failure group. Sirolimus might have effect to stop progression of rejection.
Conclusion : Acute rejection cases in pancreas transplant alone has various clinical courses. Early detection and early treatment is essential for graft survival.

PO121 LIVING DONOR LIVER TRANSPLANTATION USING RIGHT LOBE GRAFT FROM A DONOR WITH THE LEFT-SIDED GALLBLADDER ANOMALY

Sung Yeon Hong, Bong Wan Kim, Mina Kim, Hee Jung Wang
Ajou University School of Medicine

Introduction: The occurrence of left-sided gallbladder is a rare congenital anomaly. Failure to recognize the anomaly may lead to an inadvertent ligation of the main portal trunk at the major liver resection with potentially catastrophic consequence of the patient. In our institution, 3 potential donors for LDLT were found to have left-sided gallbladder anomaly. One of them was selected as living liver donor. Our inclusion criteria for liver donation was revised.
Patient and method: Case: A 34-year-old blood-type AB Rh+ son donated right lobe (1.27% graft volume to recipient weight ratio; GRWR) to his mother (blood type B Rh+) with B-viral hepatitis and hepatocellular carcinoma. Preoperative imaging studies and intraoperative cholangiography showed left-sided gallbladder anomaly with early branching of right posterior bile duct and right anterior bile duct branch arising from the left duct. The liver transection was uneventful and a successful result was obtained.
Discussion: The finding of a left-sided gallbladder should alert the liver transplant surgeon to the presence of anomalous intrahepatic branching of the portal pedicles and the risk of inadvertent ligation of main portal trunk. The potential donors must be carefully evaluated for suitability and safety for partial hepatectomy, as well as the technical aspect of graft implantation. Second, the P2 and P3 must have a common trunk.

Since the left-sided gallbladder anomaly presents right sided falciform ligament, atrophy of segment 4 and absence of extrahepatic portal bifurcation in some occasion, the liver with such anomaly should meet the following criteria for successful liver donation. First, the portal vein must be a bifurcation type.

Variables	Total rejection (%) Not $N = 249$	Yes $N = 46$	*p*-value	Cellular rejection (%) Not $N = 266$	Yes $N = 29$	*p*-value	Humoral rejection (%) Not $N = 272$	Yes $N = 23$	*p*-value
Men	66.7	63	ns	66.2	65.5	ns	66.5	60.9	ns
Pretrasplant diabetes mellitus	22.5	21.7	ns	22.6	20.7	ns	22.1	26.1	ns
Hemodialysis	75.1	84.8	ns	75.2	89.7	ns	76.1	82.6	ns
Duration of dialysis > 2 years	60.2	69.6	ns	59.8	79.3	0.029	62.5	52.2	ns
Expanded criteria donor	62.3	72.7	ns	63.3	69.0	ns	37.5	81	ns
Hypersensitization	11.3	21.7	ns	13.6	6.9	ns	11.1	34.8	0.004
Retransplantation	5.6	15.2	0.029	7.5	3.4	ns	5.5	26.1	0.003
Induction (AntiCD25/ timo/ Timo+ FK diferido)	72.6/12.1/15.3	67.4/21.7 /10.9	ns	70.2/14.3/ /15.5	86.2/6.9 /6.9	ns	73.4/11.8 /14.8	52.2/34.8 /13.0	0.008
> 3 HLA mismatching	62.8	65.2	ns	63.6	58.6	ns	63.0	65.2	ns
Delayed graft function	34.3	50.0	0.036	64.7	50.0	ns	35.2	54.5	ns

PO122 IGG DONOR-SPECIFIC ANTI-HLA ANTIBODY SUBCLASSES AFTER SUCCESSFUL DESENSITIZATION TREATMENT IN KIDNEY TRANSPLANTATION

Younhee Park, Borahm Kim, Hyon-Suk Kim
Department of Laboratory Medicine, Severance Hospital, Yonsei University College of Medicine

Background: Donor specific HLA antibodies (DSAs) can cause rejection and graft loss after kidney transplantation. To avoid those situation, desensitization treatment, such as plasmapheresis and medical treatment like IgG Infusion and Rituximab. However, effects after same desensitization treatment vary among patients. We compared IgG subclasses compositions of DSA between patients' groups with no DSA and remaining DSA after desensitization.
Methods/Materials: We tested panel reactive assay single antigen bead assay with serum sets of before desensitization and after desensitization of 7 transplanted patients after successful desensitization and 5 patients with DSA after desensitization. DSA characteristics, mean fluorescence intensity (MFI), C1q-binding, and IgG subclass were compared between two groups.
Results: Age, transplant number, ABO incompatible status, and MFI results before desensitization were not significant between two groups. After desensitization treatment, MFI results of total IgG, IgG1, C1q-binding DSA decreased in transplanted patient group, but MFI results of those in DSA positive patient group remained significantly high. ROC curve analysis for relevant to the prediction of success desensitization treatment showed highest AUC value of IgG1 (0.965) and followed total IgG (0.893), IgG3 (0.671), IgG4 (0.682), and IgG2 (0.516).
Conclusion: Our study results suggest DSA with high MFI in IgG1 is associated with desensitization treatment failure before kidney transplantation. After desensitization treatment, decrease of IgG1 and total IgG MFI of DSA can be an indicator that predict successful desensitization treatment.

PO124 HCV AND KIDNEY TRANSPLANTATION: PUSHING THE LIMITS FOR LIVING DONATION

Anna Rossetto[1], Giorgia Comai[2], Vania Cuna[2], Cristina Morelli[3], Antonio Siniscalchi[4], Valeria Corradetti[2], Massimo Del Gaudi[1], Chiara Zanfi[1], Valentina Bertuzzo[1], Lorenzo Maroni[1], Federica Odaldi[1], Giacomo Frascaroli[1], Antonietta D'Errico[5], Gaetano La Manna[2], Matteo Ravaioli[1]
[1]Department of General Surgery and Transplantation, Sant'Orsola-Malpighi University Hospital, Bologna; [2]Nephrology Dialysis and Renal Transplantation Unit, S. Orsola-Malpighi University Hospital, Bologna; [3]Liver and Multiorgan Transplantation, University Hospital Sant'Orsola-Malpighi, Bologna; [4]Unit of Anesthesiology, Department of Medical and Surgical Sciences, University Hospital Sant'Orsola Malpighi Hospital, Bologn; [5]Anatomy, Pathological Histology Operative Unit, S. Orsola-Malpighi University Hospital

Kidney transplantation is the treatment of choice for end stage renal disease. Because organ shortage, strategies to expand the donor pool are continuously developing. Until recently, HCV infection and elderly were contraindications to living donation. Marginality criteria have been extended for age and for HCV positivity with the advent of anti HCV drugs (DAA). We report a particular case of living donor kidney transplantation carried out at our center. Cases of this type are still very rare.

This is the case of a kidney living donation from a donor (the father, 78 years old) previously treated with DAA for acute HCV hepatitis (genotype 1b) with SVR to a recipient (the son, 52 years old) affected by IgA nephropathy on hemodyalisis. The transplant was uneventful. No indication for antiviral prophylaxis was given but only weekly evaluation of HCV-rna for 10 weeks after transplant (negative).

DAA allows the eradication of the infection in almost all patients with remission of autoimmune manifestations and normalization of peripheral T and B-lymphocyte homeostasis. They could play a role in acute rejection by reactivating the homeostasis of the adaptive and innate immune response. Rarely, DAA cause nephrotoxicity. HCV positive donors represent an important economic saving: although HCV positivity decreases graft and patient survival, it represents a gain in terms of survival compared to prolonged hemodialysis, with DAA therapy. Living donation from old donors have shown good results, and the advantages of living donation compared to cadaveric donation seem 'to compensate' the marginality of graft in term of age. Living donation from HCV treated donor with SVR allows to avoid exposition to antiviral drugs and to the infection even if for a limited period of time (the time needed for antiviral therapy).

Even if further studies are necessary and a longer follow up is needed, it's promising to safely expand the pool of organs, allowing a larger access to kidney transplant.

PO125 INTERLEUKIN-7 RECEPTOR BLOCKADE BY A HUMAN ANTI-CD127 MONOCLONAL ANTIBODY IN NON-HUMAN PRIMATE KIDNEY TRANSPLANTATION

Hoa Mai[1], Nguyen Thi Van Ha[1], Julien Branchereau[1], Nicolas Poirier[2], Karine Renaudin[1], Caroline Mary[2], Lyssia Belarif[2], David Minault[1], Jeremy Hervouet[1], Stéphanie Le Bas-Bernardet[1], Jean-Paul Soulillou[1], Bernard Vanhove[2], Gilles Blancho[1], Sophie Brouard[1]
[1]Centre de Recherche en Transplantation et Immunologie [CRTI] UMR 1064, INSERM, Université de Nantes, ITUN, CHU de Nantes; [2]OSE Immunotherapeutics

Background: IL-7 is an important cytokine for T cell lymphopoiesis. Blockade of the IL-7 signaling pathway has been shown to induce long-term graft survival or graft tolerance in murine transplant models through inhibiting T cell homeostasis and favoring immunoregulation. In human transplantation, it has been suggested that T cell homeostasis following some immunosuppressive therapies might be detrimental to transplant patients.
Materials and methods: In this study, we assessed for the first time the effects of an anti-human CD127 mAb administered in combination with low-dose tacrolimus ($n = 4$) or thymoglobulin ($n = 4$) in a life-sustaining kidney allograft model in baboons.
Results: Contrary to our expectation, the addition of anti-CD127 mAb to low-dose tacrolimus or thymoglobulin did not prolong graft survival compared to low-dose tacrolimus alone or thymoglobulin alone, respectively. Anti-CD127 mAb administration leaded to full CD127 receptor occupancy during the follow-up period. However, all anti-CD127 mAb-treated animals lost their kidney graft between one and two weeks after transplantation. Pathological study of explanted kidney grafts revealed 2 mixed acute T cell-mediated rejection (TCMR) and acute antibody-mediated rejection (AMR), 3 TCMR, and 3 ischemic necrosis. Donor-specific antibodies were not detected using flow cytometry method, despite prominent peritubular capillary C4d deposition in 2 animals with AMR.
Conclusions: Unlike in rodents, anti-CD127 mAb treatment did not decrease the absolute numbers of lymphocyte and lymphocyte subsets and did not effectively inhibit post-depletional T cell proliferation and homeostasis in nonhuman primates. Thus, unlike in mice, IL-7 does not seem to be a limiting factor for T cell homeostasis in primates.

PO126 RECURRENT HEPATOCELLULAR CARCINOMA AFTER LIVER TRANSPLANTATION: IDENTIFYING THE HIGH-RISK PATIENT USING THE EXPRESSION PROFILES OF EMT-ASSOCIATED LNCRNAS

Secil Ak Aksoy, Fuat Aksoy, Haliz Ziya Dundar, Berrin Tunca, Pinar Tasar, Nesrin Ugras, Unal Egeli, Gulsah Cecener, Omer Yerci, Ekrem Kaya
Uludag University

Background: Liver transplantation (LT) is the most commonly used clinical therapy for hepatocellular carcinoma (HCC) treatment. However, these treatments have the risk of recurrence. Previous studies have focused on the causative Long noncoding RNAs (LncRNAs) involved in HCC that may shed some light in understanding the still unclear molecular processes in HCC. In additional, recent studies have shown that epithelial-mesenchymal transition (EMT) mechanism plays a vital role in tumor recurence. This study aims to investigate the prognostic value of EMT-associatedlncRNAs in HCC tumors.
Method: Between 2007 and 2014, 82 HCC patients who underwent LT in single centre (Uludag University Organ Transplantation Centre) were enrolled. The relationship between the altered expression of MALAT1, HOTAIR, NEAT1, HULC which were EMT-associated LncRNAs and clinical, pathological features were assessed.
Results: The expression level of MALAT1 was 3.28-fold higher, HOTAIR was 2.21-fold higher in tumor tissues compared with normal tissues ($p < 0.05$). The expression of HOTAIR was 3.56-fold upregulated in patients with recurrence ($n = 7$) during the 5-year follow-up ($p = 0.022$).
Conclusion: In this study, we demonstrated that the high level of HOTAIR expression promising biomarker for the prediction of recurrence in HCC patients after LT. Using this marker, a new scoring system can be designed to detect recurrence in HCC patients following LT.

PO127 PURE LAPAROSCOPIC LIVING DONOR RIGHT HEPATECTOMY USING REAL-TIME INDOCYANINE GREEN FLUORESCENCE IMAGE

Sung Hoon Choi, Jung Jung Lee, Jae Young Jang
Bundang CHA Medical Center

Introduction: In recent decades, the quantitative and technological development of laparoscopic liver resection has resulted in an extension into the transplantation area 1, 2. However, laparoscopic living donor hepatectomy is still in its infancy due to technical difficulties and extreme caution regarding donor safety 3. Several experienced major centers have demonstrated the

feasibility and safety of laparoscopic living donor hepatectomy, and recent advances in laparoscopic imaging technology support this move 4. In particular, indocyanine green near-infrared fluorescence imaging helps determine the correct liver parenchyma anatomical resection as well as the exact point of bile duct division 4–6. This video demonstrates the technique of pure laparoscopic living donor right hepatectomy and the usefulness of indocyanine green fluorescence imaging.
Methods: The donor was a 32-year-old gentleman who decided to donate part of his liver to his wife who was suffering from viral liver cirrhosis and hepatocellular carcinoma. His BMI was 20.3 kg/m2 and the preoperatively estimated donor's right liver volume was 836 ml, representing 63.6 % of his entire liver. With the recipient's weight of 57 kg, the graft to recipient weight ratio (GRWR) was 1.6 %. The liver had classic hilar anatomy except that the right posterior intrahepatic duct was joined seperately to the left main hepatic duct. The patient setting and the placement of the trocars were the same as for our conventional laparoscopic right hepatectomy technique 7. After right hepatic artery and portal vein isolation and clamping, 2.5 mg of indocyanine green was injected intravenously.
Results: Total operation time was 370 min and estimated blood loss was 150 ml without transfusion. Indocyanine green fluorescence imaging clearly demonstrated the anatomical demarcation between the lobes and visualized the running of the biliary tree. His postoperative course was uneventful, and he was discharged on postoperative day 7.

PO128 THE EXPRESSION STATUS OF CANCER STEM CELL MARKERS MAY PREDICT POOR PROGNOSIS IN PATIENTS UNDERGOING LIVER TRANSPLANTATION FOR HEPATOCELLULAR CARCINOMA

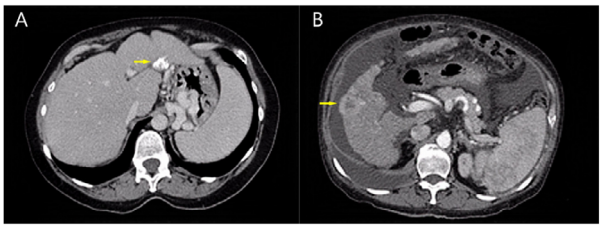
Fuat Aksoy, Haliz Ziya Dundar, Secil Ak Aksoy, Berrin Tunca, Pinar Tasar, Nesrin Ugras, Unal Egeli, Gulsah Cecener, Omer Yerci
Uludag University

Background: According to recently studies, cancer stem cells (CSC) have the ability iniating and sustaing tumor growth, sistemic/local recurrence and resistance to adjuvan therapy in solid tumors. Recent studies shown that the development of malignant HCC is dictated by of CSCs. Present study aims to investigate the existence and prognostic value of CSC markers in HCC after liver transplantation (LT).
Matherial and method: In this study, we evaluated 50 patients who underwent LT for HCC between 2007 and 2015 years at Uludag University Organ Transplantation Center. 50 hematoxylin and eosin-stained slides cut from formalin-fixed, paraffin-embedded (FFPE) HCC tissues were evaluated by a pathologist, and the areas of the slide representing tumor and normal were identified. The samples were analyzed for the presence and differential expression of LGR5, CD44 and CD133 using RT2 Profiler PCR Array Data Analysis (http://www.sabiosciences.com/pcr/arrayanalysis.php) to compare the PCR array analysis results and the characteristics of the tumors and cases.
Results: Of the 50 (25 HBV-mediated, 25 HCV-mediated) patients, 27 were men and 23 were women, with an average age of 58 years (range, 27–68 years). The LGR5 was not significantly expressed in HCC tumors compared to normal tissue. CD44 and CD133 expression level was significantly higher in tumors than in corresponding normal tissues (3.1 fold, $p = 0.023$; 4.2 fold $p = 0.005$, respectively). Increased CD133 expression was associated with HCV-infection ($p = 0.033$). Over expression of CD133 were associated with short overall survival.
Conclusion: Here, we report that CD133 and CD44 may acts as a functional CSC in the aggressive of HCC. Our results suggest that these molecules may serve as a candidate prognostic biomarker and target for new therapies in these tumors.
Keywords: cancer stem cells, hepatocellular carcinoma, LGR5, CD133, CD44:

PO129 LIVER TRANSPLANTATION FOR HEPATOCELLULAR CARCINOMA WITHIN MILAN CRITERIA IN PATIENTS WITH ELEVATED ALPHA-FETOPROTEIN

Eugenia Sánchez Rodríguez, Raquel Ríos León, Javier Graus Morales, Francisco Gea Rodríguez, Miguel García González, Agustín Albillos
Hospital Universitario Ramón y Cajal

Introduction: The aim of prelisting assessment in patients with HCC is to detect risk factors of post-LT recurrence. Patients with higher pre-transplant AFP would be at higher risk, even if there is no evidence of tumor viability. No consensus has been achieved on AFP thresholds that could predict poor prognosis.
Case report: Fifty-five-year old cirrhotic woman with a 2 cm lesion (LIRADS5, F1B). AFP 2,084 ng/ml. After chemoembolization, no evidence of tumour viability nor extrahepatic disease was found. AFP12 ng/ml. During follow-up AFP raised although still no evidence of tumoral recurrence (brain and Chest-abdomen-pelvis Computed tomography scan-CT-, abdominal magnetic resonance imaging–MRI- and bone gammagraphy). 2 years later she received a LT. AFP 1,226 ng/ml. A1 cm nodular peritoneal mas was seen during urgent re-laparotomy. It proved to be a HCC metastasis. 61 year-old cirrhotic woman with a 3 cm lesion inconsistent with HCC (LIRADS3) on CT (F1B) and MRI. No extrahepatic tumoral disease. AFP 1,526 ng/ml. A month latter, she underwent a LT. The histopathological (HP) examination of a 2 cm mesenteric adenopathy showed findings suggestive of HCC metastasis and that of the explanted liver confirmed diffuse HCC. DISC: Most predictors of post-LT recurrence are obtained from the explant HP examination. Milan criteria are worldwide accepted as the gold standard for LT indication for HCC. AFP has been proposed to be a possible prognostic marker: patients with higher level at diagnosis would have a higher risk of recurrence, although the best cut-off point does not seem to have been found (200–1,000 ng/ml). It is difficult to establish cut-off points based only on the level of APF when radiological images show HCC within Milan criteria or do no reveal any malignant disease.
Conclusion: Patients who present with AFP above 1,000 ng/ml, even if there is no radiological conclusive evidence of active intra or extrahepatic HCC, will probably have disseminated disease with a high rate of post-LT tumor recurrence.



PO130 VALIDATION OF THE ONCOHEPA TEST, A MULTIGENE EXPRESSION PROFILE TEST, AND THE TUMOR MARKER-VOLUME SCORE TO PREDICT POSTRESECTION OUTCOME IN SMALL SOLITARY HEPATOCELLULAR CARCINOMAS

Su-Min Ha
Asan Medical Center

Purpose: OncoHepa test is a multigene expression profile test developed for assessment of hepatocellular carcinoma (HCC) prognosis. Multiplication of α-FP, des-γ-carboxy prothrombin (DCP) and tumor volume (TV) gives the α-FP-DCP-volume (ADV) score, which is also developed for assessment of HCC prognosis.
Methods: The predictive powers of OncoHepa test and ADV score were validated in 35 patients who underwent curative hepatic resection for naïve solitary HCCs ≤ 5 cm.
Results: Median tumor diameter was 3.0 cm. Tumor recurrence and patient survival rates were 28.6% and 100% at 1 year, 48.6% and 82.9% at 3 years, and 54.3% and 71.4% at 5 years, respectively. The site of first tumor recurrence was the remnant liver in 18, lung in 1, and the peritoneum in 1. All patients with HCC recurrence received locoregional treatment. OncoHepa test showed marginal prognostic significance for tumor recurrence and patient survival. ADV score at 4log also showed marginal prognostic difference with respect to tumor recurrence and patient survival. Combination of these 2 tests resulted in greater prognostic significance for both tumor recurrence ($p = 0.046$) and patient survival ($p = 0.048$).
Conclusion: Both OncoHepa test and ADV score have considerably strong prognostic power, thus individual and combined findings of OncoHepa test and ADV score will be helpful to guide postresection surveillance in patients with solitary HCCs ≤ 5 cm.

PO131 UNCOMMON PRESENTATIONS OF POST TRANSPLANT LYMPHOPROLIFERATIVE DISORDER (PTLD) IN KIDNEY TRANSPLANT RECIPIENTS

Danilo Radunovic, Vesna Furic Cunko, Ivana Juric, Lea Katalinic, Ines Mesar, Ljubica Bubic Filipi, Vladimir Prelevic, Nikolina Basic Jukic
Clinical Hospital Center Zagreb

Backgruound : Extranodal involvement is common in PTLD, although the central nervous system (CNS) is an uncommon site of disease, particularly in isolation. First reported CNS-PTLD was in 1970. Since then, only 45 patients have been reported in 3 case series, which highlights the relative rarity of this condition. Musculoskeletal involvement is especially rare, with only a few cases described in the literature.
Methods: two case reports.
Results: Male patient, 49 years old, treated with kidney transplantation from LRD living related donor in the age of 27, due to end stage CKD caused by chronic unspecified glomerulonephritis. The immunosuppressive protocol consisted of cyclosporine, mycophenolate mofetil and stroid. Twenty one year after transplantation MR brain examination, after seizures, was performed and

revealed multiple lesions of brain parenchyma. Lumbal puncture was done and PCR on EBV DNA was positive. Stereotaxis brain biopsy of brain lesion was done. Pathohistological examination revealed diffuse large B cell non Hodgkin lymphoma, non GC phenotype and PTLD, Ki -67 50%, CD 20 + . There was no sign of other PTLD presentation in the body. Treated with chemotherapy and radiotherapy, but developed systemic sepsis and multiorgan failure with acute renal insufficiency treated with CVVHDF, which ended lethal. Second patient, female 37 years old; a year after second kidney transplantation from deceased donor, developed osseal lession –tumor of the forehead. Biopsy confirmed diffuse large B cell non Hodgkin lymphoma, non GC phenotype and PTLD CD20 + , and it was the only presentation of PTLD in whole body, after systematic examination. The immunosuppressive protocol consisted of cyclosporine, mycophenolate mofetil and stroid.She was successfully treated with chemo and radiotherapy, still with good graft fucntion.
Conclusion: Ann aggressive approach to PTLD tissue confirmation of diagnosis and treatment with chemotherapy or radiotherapy should be strongly considered.

PO132 HISTOLOGICAL FEATURES IN RENAL ALLOGRAFT-BIOPSY – ASSOCIATIONS WITH OCCULT UROLOGICAL OBSTRUCTIVE COMPLICATIONS

Marija Bojic[1], Heinz Regele[2], Harald Herkner[3], Gabriela Berlakovich[4], Johannes Kläger[2], Clemens Bauer[4], Christian Seitz[5], Zeljko Kikic[1]
[1]Division of Nephrology and Dialysis, Department of Medicine III, Medical University Vienna; [2]Department of Pathology, Medical University Vienna; [3]Department of Emergency Medicine, Medical University Vienna; [4]Department of Surgery, Division of Transplant Surgery, Medical University Vienna; [5]Department of Urology, Medical University Vienna

Background: Urological obstructive complications (UOC) occur in up to 15% of kidney transplantation (KTX) and account for delayed graft function (DGF). Although many cases can be ruled out by ultrasound (US), in the early post KTX-phase UOC may remain occult when there is no evident high-grade hydronephrosis (HN). While findings of acute tubular injury (ATI) in allograft biopsies (BX) may be informative, the existing literature is scarce about distinct histological features that would indicate UOC. In experimental data, tubular ectasia (TE) was associated with UOC. The aim of this study was to investigate histomorphological features, particularly TE, and their association with occult UOC and renal outcomes.
Material/Methods: Out of 1,537 consecutive KTX, we investigated 976 who had an early KTX-BX. The finding of TE classified "suspicious of UOC" was compared to clinical endpoints: DGF, eGFR and occult UOC. Additionally, histomorphological features of ATI were reevaluated by a single pathologist to increase diagnostic accuracy. Furthermore, interobserver concordance was assessed between a senior nephropathologist and a trainee.
Results: TE was evident in 58 (5.9%) patients, which was not related to DGF or eGFR. Out of these, 40% had an occult UOC close to BX (ureteral stenosis 40%, urinary leak 23%, lymphocele 13%, hematoma 13%, other 10%). TE was significantly associated with UOC when compared to matched controls [OR 2.69, $p = 0.018$]. After reevaluation of these BX including additional features of ATI, we developed a multivariate model with a highly significant relationship to UOC (ROC–AUC: 0.77, $p = 0.001$). The model provides a specificity 78% and NPV 73%. The rate of interobserver concordance was 69% (Kappa = 0.36).
Conclusion: The finding of TE together with additional distinct signs of ATI in renal allografts indicates occult UOC and should initiate more detailed diagnostic evaluation for UOC when there is no evidence of relevant HN in US.

PO133 A CASE OF HEPATITIS B VIRUS TRANSMISSION IN KIDNEY TRANSPLANTATION RECIPIENT FROM HEPATITIS B CORE ANTIBODY-POSITIVE AND HEPATITIS B DNA-NEGATIVE DONOR

Hiroaki Shimmura[1], Michihisa Ochi[1], Ryo Minoda[1], Yukiko Kouchi[1], Masayoshi Okumi[2], Kazunari Tanabe[2]
[1]Jyoban Hospital; [2]Tokyo Women's Medical University

Since the transmission risk of hepatitis B virus (HBV) is low from hepatitis B core antibody (HBcAb)-positive, hepatitis B surface antigen (HBsAg)-negative and HB DNA-negative kidney donor to recipient, kidney transplantation from HBcAb-positive donor is generally accepted. However, we experienced a case of HBV infection in a kidney transplantation recipient from a HBcAb-positive donor.
Patient: A 44-year-old male underwent ABO-blood type compatible kidney transplantation from his father. The recipient was HBcAb-negative, HBsAg-negative and HB DNA-negative before transplantation. The donor was HBcAb-positive, HBsAg-negative and HB DNA-negative before transplantation, while his mother was in a chronic HBV carrier state.
Results: After kidney transplantation, the graft function was stable with around 1.5 mg/dl in serum creatinine level. The level of aspartate aminotransferase (AST) and alanine aminotransferase (ALT) were normal before kidney transplanation. However, his AST and ALT was slightly elevated to 48 and 62 IU/L, respectively and HBsAg was turned positive five months after transplantation. In addition, 8.5 log10 IU/ml of HB DNA was detected by a TaqMan PCR- mediated assay. By further interview, it appeared that he had no chance of acquired infection in hospital and sexually transmitted infection of HBV. Therefore, we presume that infected HBV infection was derived from undetectable and cryptic HBV infected in the kidney allograft. Entecavir (0.5 mg) was administered for treatment of HBV infection. HBcAb became detectable five months after treatment and HB DNA became undetectable one year and four months after treatment without any rejection episodes.
Conclusions: HBV transmission recipient from a HBcAb-positive kidney donor is extremely rare, but is possible in kidney transplantation.

PO134 THE EFFECT OF MEDICAL COMPLICATIONS ON EARLY GRAFT FUNCTION AFTER KIDNEY TRANSPLANTATION

Hakan Düger[1], Alparslan Ersoy[2], Ayşegül Oruç[2], Abdülmecit Yıldız[2], Oktay Ünsal[2], Suat Akgür[2], Canan Ersoy[3], Mehmet Fethullah Aydın[2]
[1]Uludag University School of Medicine, Internal Medicine; [2]Uludag University School of Medicine, Internal Medicine, Department of Nephrology; [3]Uludag University School of Medicine, Internal Medicine, Department of Endocrinology and Metabolism,

A successful kidney transplant improves the quality of life and reduces the mortality risk for most patients when compared with maintenance dialysis. We evaluated the frequency of medical complications, graft and patient survival in kidney transplant recipients in early period.
Materials and methods: This retrospective study conducted in 448 patients who underwent kidney transplant surgery at our center in 10-year periods. The intra- and postoperative medical complications, graft functions and causes of graft and death were obtained from medical records.
Results: In the first 6 months period, 35.5% of the recipients had intra-operative and 85.9% had post-operative medical complications. The most Intra-operative complications were hypertension (15%) and hypotension (13.2%). Post-operative medical complications were hypertension (51.4%), pneumonia (21.7%), hyperpotasemia (15%), urinary tract infection (17.3%), hyperglycemia (13.7%), transaminase elevation (12.5%), hyponatremia (10.9%) and hypotension (10.6%). Only donor age in patients who had medical complications was higher.

The post-operative medical complication ratios was higher and the length of hospitalization was shorter in living donor transplants (Table 1). Patients were divided into two groups according to working hours: the time of operation 08:00 to 17:00 and 17:00 to 08:00. The ratios of post-operative medical complication was significantly higher in patients who were operated out of work (91% vs. 82%, $p = 0.028$).

Forty-one patients had graft loss within the first 6 months. 25 patients lost their lives with functional graft. 9 had primary non-function, and 7 had acute rejection. There was no significant relationship between graft and patient survivals with development of medical complication.

Conclusion: As a result, medical complications are common in early period. However, the development of medical complications during the first 6 months does not significantly affect transplant outcomes.

Table 1. The medical complication ratios, length of hospitalization and graft dysfunction according to donor type

Variables	Living donor (n=199)	Deceased donor (n=249)	P value
Intra-op medical complication (n,%)	68 (42.8)	91 (57.2)	0.602
Post-op medical complication (n,%)	28 (63.6)	16 (36.4)	0.001
Low eGFR ratio at 1st mo* (n,%)	16 (8.6)	46 (19.2)	0.002
Hospitalization duration (day)	15.8±12.2	24.7±13.9	<0.001

* eGFR <60 mL/dk/1.73 m^2

PO135 MULTIPHASIC CT OF KIDNEY DONORS: ANATOMICAL VARIANTS AFFECTING SURGICAL APPROACH

Ashraf Imam[1], Abed Khalaileh[2], Samir Abu Gazala[3], Keren Tsukert[2], Roy Abel[3], Michael Elhalel[2], Hadar Merhav[2]
[1]Hadassah Medical Center; [2]hadassah hospital; [3]Hadassah Hebrew University Medical Center

Introduction: In recent years altruistic kidney donation has become an increasingly common treatment option for patients with end stage kidney disease. We aimed to evaluate the role of multiphasic CT scan in these patients.
Materials and methods: We retrospectively evaluated potential kidney from January 2016 to July 2017 that underwent multiphasic CT studies including non-contrast, arterial phase, venous phase and urographic phase. All studies were evaluated for anatomy of the kidneys and collecting systems, as well as extra renal findings. All surgical reports were evaluated to calculate sensitivity of imaging findings as well as changes to the surgical approach.
Results: During the study period 98 potential donors were scanned, of which 64 underwent surgery. CT findings were as follow: 76 patients (77.5%) had one right renal artery (RRA), 20 patients (20.5%) had two RRA, two patient (2%) has three RRA. 94 patients (95.9%) had one right renal vein (RRV), 4 patients

(4.1%) had two RRV. 86 patients (87.7%) had one left renal artery (LRA), 10 patients (10.2) had two LRA and two patient (2.1%) has three LRA. 96 patients (97.9%) had one left renal vein (LRV), two patient (2.1%) has two LRV. The surgical approach changed in 15.6% of cases. In these patients the right kidney was removed instead of the left one. The sensitivity of CT scan for arteries was 94%, and in 6 cases, polar arteries were missed; the s

PO136 THE EVALUATION OF NEUTROPHIL-TO-LYMPHOCYTE RATIO (NLR) IN KIDNEY TRANSPLANT PATIENTS

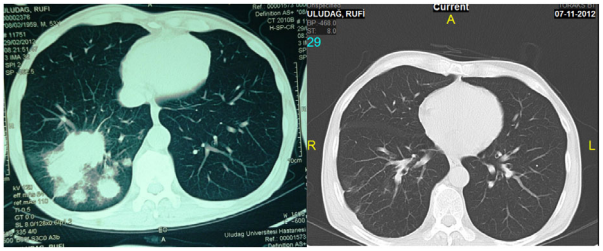
Hiroki Shirakawa[1], Ayumi Ishiwatari[1], Takayuki Kennoki[1], Junpei Hasegawa[1], Sachiko Wakai[1], Tadahiko Tokumoto[2], Masayoshi Okumi[3], Kazunari Tanabe[3]
[1]Ohkubo Hospital; [2]Dokkyo Medical University Saitama Medical Center; [3]Tokyo Women's Medical University

Background: Neutrophil-to-lymphocyte ratio (NLR) is a novel simple biomarker in inflammation. It has emerged as a predictor of poor prognosis in cancer and cardiovascular disease in general population. Recently, some studies have demonstrated that higher NLR in end-stage renal disease (ESRD) patients was associated with the increased risk of cardiovascular disease. However, little was known of its prognostic value in kidney transplant patients.
Materials and methods: Between April 2009 and December 2017, 147 kidney transplantations were performed in our institute. We retrospectively investigated NLR, graft function, and pathological findings within one year after the operation. The NLR of transplant recipients were compared with that of dialysis patients ($N = 40$) and healthy controls ($N = 30$). The transplant recipients were divided into two groups; Group I: Rejection group ($N = 32$) and Group II: Non-rejection group ($N = 115$). The NLR of both groups were compared.
Result: Mean NLR of the healthy control group was significantly lower than those of ESRD patient group (healthy control group: 1.862 ± 0.471, transplant recipient group (preoperative NLR): 3.707 ± 2.121 and dialysis group: 4.351 ± 2.359, respectively; $p < 0.05$). The NLR after the transplantation (mean NLR: 2.830 ± 1.427) was higher than that of healthy controls, however, that was low level compared with dialysis patients. Between Group I and Group II, there were no significant difference in NLR. In some cases, NLR increased simultaneously with rejection.
Conclusions: The NLR after the kidney transplantation was lower than that of dialysis patients.The relation between NLR and rejection was not significant, however in some cases, NLR seemed to have relation with rejection. The monitoring of NLR may possibly be a cheap, useful predictor of prognosis in transplant patients. However, further studies are needed in larger of patients and over longer periods of follow-up.

PO137 NOCARDIA CYRIACIGEORGICA PNEUMONIA MIMICKING LUNG CANCER IN A KIDNEY TRANSPLANT PATIENT

Alparslan Ersoy[1], Cuma Bülent Gül[2], Abdülmecit Yıldız[1], Ayşegül Oruç[1], Oktay Ünsal[1], Suat Akgür[1], Halis Akalın[3]
[1]Uludag University School of Medicine, Department of Nephrology; [2]Bursa Yuksek Ihtisas Education and Research Hospital, Department of Nephrology; [3]Uludag University School of Medicine, Department of Infectious Disease and Clinical Microbiology

Nocardiosis is an uncommon gram-positive bacterial opportunistic infection. Inhalation of the organism is considered to be the most common mode of entry in the majority of infections involve the lung. Nocardial infection usually develops in immunocompromised patients with malignancy, organ and hematopoietic stem cell transplantation and HIV infection. Nocardia cyriacigeorgica is a recently characterized species within the genus of Nocardia. We reported the first pulmonary infection of nocardiosis in a kidney transplant recipient caused by rare species of Nocardia.
Case report: A 54-year old man had a kidney transplantation from an deceased donor in 2008. On December 2012, he admitted with a complaints of fever and productive. On his physical examination, there was cranckles in the basal field of the lungs. He had diagnosis of community-acquired pneumonia and levofloxacin treatment were started. On his follow-ups, thoracic CT revealed a 7x5 cm of solid mass in the postero-basal segment of the lower lobe in the right lung. His bronchoalveolar lavage cultures were negative for bacteria, acido-resistant bacilli and fungi. PET-CT was consistent with increased metabolic activity (SUVmax: 13.14) at 7x6 cm irregularly limited lesion. CT-guided transthoracic biopsy did not show tumor infiltration, but was reported as bronchiolitis obliterans and organized pneumonitis. The patient was started on prednisolone at a dose of 1 mg/kg/day. On the 4th day of treatment, N. Cyriacigeorgica produced in the culture. CT scan for intracranial nocardiosis was unremarkable. He was successfully treated for nocardiosis with oral trimethoprim/sulfamethoxazole for 6 months. There was marked radiographic improvement in the size of the mediastinal mass.
Conclusion: We reported a rare case of nocardia with atypical presentation. An invasive approach may be necessary for diagnosis. Common antimicrobial susceptibility patterns should be considered for the most common Nocardia species.



PO141 VISCERAL LEISHMANIASIS IN RENAL TRANSPLANT RECIPIENT

Blanca Villacorta[1], Alejandro Suárez-Benjumea[2], Carmen Grande[2], Carmen Gonzalez-Corvillo[2], Miguel Angel Pérez-Valdivia[2], Francisco Manuel Gonzalez-Roncero[2], Marta Suñer[2], Gabriel Bernal[2], Jose Luis Rocha[2]
[1]Virgen del Rocío Hospital; [2]Virgen del Rocio Hospital Andalusian Health System

We present the case of a 50 yo patient with chronic kidney disease due to lupus nephritis that receives a kidney transplant from a deceased donor . 1 months after kidney transplant was performed the patient developed pancytopenia that did not improve after the inmunossupressive therapie was revised , consecuently the patient was refered to Haematology. Clinically the patient presented asthenia some 2 months ago that improved after EPO administration, not weight loss, fever or profuse sweating was showen.She did not refered travels aboard. On physical exam splenomegaly or hepatomegaly were not apparent.
Blood test: leukocites 1.8x10e9/L, neutrofils 0.5x10e9/L, Hb 95 g/L, platelets 67 x10e9/L. . HIV, HCV, HBV serology were negative. Urine inmunofixation: a lambda monoclonal band was detected. Bone marrow aspiration and biopsy was performed, and a massive medular occupation by Leishmania amastigotes was observed.

Treatment based on Liposomal- Anphoterycina B was initiated, 40 mg/kg, total dose: 4 mg/kg/día, 5 doses per day as part of the induction fas were prescribed, afterwards the mantenance fase was started. The treatment was well tolerated.

After the treatment was completed a new bone marrow aspiration was performed and it was confirmed that the infection was cured.

Mild anemia and trombopenia persisted due to her connective pathology and the inmunossupressive therapy, but both, anema and trombopenia were controlled by usual therapies.

Vsiceral leishmaniasis in solid organ transplant recipients has been previosly reported , it has been described as a long term complication more frecuently in kidney transplant recipints (median: 19 monts posttransplant). It may appear as a reactivation of a latent infection transmited by de graft or as a primoinfection

We present an atipycal case, because of the time of presentation and because of the insidious presentation of an unusual microorganism tha was identified early.

PO142 DESEASED DONOR BODY MASS INDEX AND KIDNEY GRAFT SURVIVAL. EXPERIENCE IN OUR AREA

Blanca Villacorta[1], Jorge Calvillo[2], Miguel Angel Pérez-Valdivia[3], Alejandro Suárez-Benjumea[3], Francisco Manuel Gonzalez-Roncero[3], Gabriel Bernal[3], Marta Suñer[3], Maria de los Ángeles Rodriguez-Pérez[3], Blanca Gasco[3], Carmen Gonzalez-Corvillo[3]
[1]Virgen del Rocío Hospital Andalusian Health Service; [2]Biomedical Engineering group. University of Seville; [3]Virgen del Rocio Hospital Andalusian Health System

Introduction: There is a lack of evidence about the impact of Deceased Donors Body Mass Index (BMI) in kidney graft outcomes. There are no national or international recommendations related to deceased donors BMI, as a result, there is a large variability in practice and in acceptance criteries at transplant centers.
Object:
Analyse decease donors index and its relation with graft survival:
Methods: Retrospective analysis, dates collected from SICATA data base since January 1st 2006 and December 31st 2015 from our area (Sevilla-Huelva). Graft failure was defined as return to dialysis.

$N = 904$ cases. 5 groups were defined BMI < 20 ($N = 16$), 20 35 ($N = 45$). Groups were compaired regarding to graft survival (death censored) with Kaplan Meier log rank. SPSS 24.0

Results: Table 1 shows results and figure shows each group survival . Regarding to the results it is not possible to conclude that BMI has a significant influence over the graft survival

Conclusions:

In our experience in abscence of clinical evidence that may sugest advers results on the kidney graft recipient, it could be an error to make restrictions regarding to deceased donors BMII and it could possibly limit a potential group of donors. Having into account that kidney transplant improves survival and cuality of life of patients on renal replacemet therapy, more studies are needed to make official recommendatios and to increase a potential group of donors.

		<20		20-25		25-30		30-35		>35	
	IMC-Don_Grupos	Chi-cuad.	Sig	Chi-cuad.	Sig	Chi-cuad.	Sig	Chi-cuad.	Sig	Chi-cuad.	Sig
Log Rank (Mantel-Cox)	<20			,577	,447	,835	,361	,006	,939	,048	,826
	20-25	,577	,447			,000	,986	2,083	,149	,445	,505
	25-30	,835	,361	,000	,986			2,285	,131	,439	,508
	30-35	,006	,939	2,083	,149	2,285	,131			,086	,770
	>35	,048	,826	,445	,505	,439	,508	,086	,770		

Table 1.

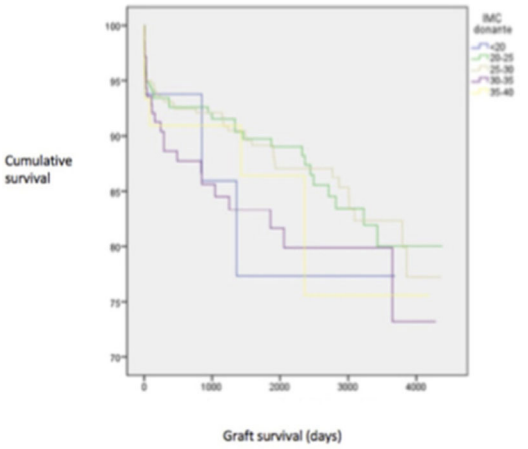


Figure 1.

PO146 INTRA-RENAL EXPRESSION OF THE INFLAMMATION-REGULATING ZINC FINGER PROTEIN AND ITS SIGNIFICANCE IN THE FOLLOW-UP AFTER KID-NEY TRANSPLANTATION

Simone Cosima Boedecker[1], Tamara Dietrich[1], Karin Schäfer[1], Daniel Sollinger[2], Jens Lutz[3], Julia Weinmann-Menke[1]

[1]I. Medical Department, University Hospital Mainz; [2]Dialysezentrum am Brand, Mainz; [3]Kemperhof-Gemeinschaftsklinikum Mittelrhein, Innere Medizin-Nephrologie, Infektiologie

The zinc finger protein A20 reduces inflammatory reactions by inhibiting the TNF-α, IL-1 or Toll-like receptor 4 mediated activation of the transcription factor NF-κB. It has been shown that A20 is involved in the pathogenesis of inflammatory and autoimmune diseases in tissue as well as in lymphocytes. The role of A20 in ischemia/reperfusion damage of a graft kidney or in rejections is still unclear.

The aim of our investigations is a) to evaluate the expression of A20 on circulating leukocytes before and after as well as b) to evaluate the renal expression pattern after renal transplantation and c) to correlate it with clinical parameters of renal function, rejections and immunosuppression.

Our results show that A20 is expressed in circulation on CD4 + , CD19 + , CD11b+ and CD14 + leukocytes and a reduction is detectable after transplantation (7 days after renal tranplantation). Intrarenal tubular epithelial cells (TEZ) as well as infiltrating cells express A20. In further investigations of patients with cellular rejection, we were able to show that the expression of A20 increases intrarenal on infiltrating cells as well as on TEZ. On circulating leukocytes, however, we could not detect a unified picture of A20 expression. This could be related to the intensified immunosuppression already used in some cases prior to sample collection.

In summary, our data show that the zinc finger protein A20 could play a role in alloimmune processes associated with renal transplantation. Future investigations will show whether A20 has a stimulating or inhibitory effect on such immune processes after transplantation and what significance this has for the long-term transplant function including the development of transplant fibrosis.

PO147 THE NATURAL HISTORY OF METASTATIC HEPATOCELLULAR CARCINOMA

Lucy Potter[1], Ashish Saharia[1], Ahmed Kaseb[2], Constance Mobley[1], Keri Lunsford[1], Mark Hobeika[1], Hemangshu Podder[1], Rafik Ghobrial[1], Ahmed Gaber[1]

[1]Houston Methodist Hospital; [2]MD Anderson Cancer Center

Background: Hepatocellular carcinoma (HCC) is a disease that causes significant morbidity and mortality among patients. However, the natural history of metastatic HCC (MHCC) is not well known.

Methods/Materials: Here, we present a case series of 22 patients with MHCC. Data was analyzed using Stata 15 software.

Results: Out of the 22 total patients, 18 had chronic kidney disease (CKD); 17 had non-alcoholic steatohepatitis (NASH); 17 had type 2 diabetes mellitus (T2DM); 14 had a history of alcohol abuse (ETOH); 11 had hypertension (HTN); 15 had hepatitis C (hepC); 3 had hepatitis B (hepB); 1 had Hodgkin's lymphoma. Treatments included sorafenib (17 patients), regorafenib (7), transarterial chemoembolization (15), radiation therapy (12), and chemotherapy (3). The average timespan from date of HCC diagnosis to date of metastasis diagnosis was 2.33 ± 2.46 years (mean ± standard deviation). Three people were diagnosed with metastasis at the time of original HCC diagnosis. Spread sites included the lung (9 patients), adrenal glands (4), bone (4), peritoneum (3), duodenum (1), and pericardium (1). Seven patients received liver transplants; one received a transplant before HCC diagnosis due to hepC cirrhosis. The time from HCC diagnosis to transplant was 1.35 ± 0.56 years. A total of 5 patients died, including 2 patients who received transplants. The time from HCC diagnosis to death was 2.15 ± 1.59 years.

Conclusion: The natural history of MHCC involves the presence of multiple comorbidities such as hepB, hepC, CKD, NASH, T2DM, and ETOH abuse. The most common metastasis sites include the lung, adrenal glands, bone, and peritoneum. Despite extensive treatment use, the length of time from initial HCC diagnosis to metastasis and death is a few years. Further research is needed to look at the natural progression of this disease.

PO149 DIAMOND IN THE ROUGH: SUCCESSFUL UTILIZATION OF DUAL KIDNEYS IN AN UNUSUAL EXTENDED CRITERIA DONOR

Lucy Potter, Stephanie Yi, Richard Knight, Ahmed Gaber, Hemangshu Podder

Houston Methodist Hospital

In renal transplantation, about 2,700 procured kidneys are discarded every year in the United States (US) due to factors such as suboptimal biopsy results, donor age, presence of proteinuria, high terminal creatinine (Cr), and history of comorbidities such as diabetes (DM) and hypertension (HTN). This is especially true in the case of extended-criteria donor (ECD) organs. However, these factors may not be the best standard to refer to when assessing a kidney's longevity and success in transplantation. Strategies such as dual implantation may be key in utilizing traditionally marginal organs.

Here, we present a case of a successful dual-kidney transplant (DKT) from an 86-year old male donor with a terminal Cr of 0.7 mg/dl. The donor's kidney donor profile index (KDPI), a clinical parameter used to estimate the risk of graft failure, was more than 99%. Here, the donor risk index was exceptionally high due to his age and cause of death, hemorrhagic stroke. The recipient was a 56-year old female with end-stage renal disease (ESRD) due to HTN. Cold ischemia time was 32 h and 30 min. The right and left kidneys were placed on a hypothermic pulsatile perfusion machine [LifePort] with the following parameters prior to implantation: pressures of 16/5 and 29/17 mmHg, flow of 99 and 82 ml/min, and resistance of 0.12 and 0.30 mmHg/ml/min, respectively. The recipient had immediate graft function (discharge Cr = 0.9 mg/dl) and maintained excellent kidney function with a Cr = 1.2, 1.1, and 1.0 mg/dl at 1-, 3- and 6-months, respectively. She had 2 cases of urinary tract infections, but no episodes of rejection.

In the era of an increasing shortage of available renal allografts for patients, where demand outnumbers supply by 8.8 to 1 in the US, out-of-criteria kidneys should not be automatically discarded. We encourage assessing organs on a case-by-case basis. More studies are needed to establish alternative criteria for beyond criteria, ECD kidneys.

PO152 SMOKING INCREASES LUNG RELATED COMPLICATIONS AND OVERALL MORTALITY IN KIDNEY TRANSPLANT PATIENTS

Dorina Esendagli[1], Ebru H. Ayvazoglu Soy[2], Elif Kupeli[1], Sule Akcay[1], Adnan Torgay[3], Gokhan Moray[2], Mehmet Haberal[2]
[1]the Department of Pulmonary Diseases, Faculty of Medicine, Baskent University, Ankara; [2]the Department of Transplantation, Faculty of Medicine, Baskent University, Ankara; [3]the Department of Anesthesiology, Faculty of Medicine, Baskent University, Ankara

Introduction: Kidney transplantation is considered the best treatment option for end-stage kidney disease. It is crucial to determine the risk factors that play a role in the graft survival and the overall well-being of the recipients. In this study, the smoking status of kidney recipients was analyzed in terms of lung-related complications, rejection rates and overall mortality.
Methods: Between November 1975 and February 2019, we performed 2971 kidney transplants (2,289 living donor, 682 deceased donor) at our centers. This study was performed retrospectively by analyzing the data of the adult kidney transplant recipients who underwent surgery between January 2013 and January 2018. All kidney recipients were evaluated in the Pulmonary Diseases Department prior to surgery.
Results: A total of 150 kidney transplantations were performed in the specified timeline. The average age of the recipients was 37.5 ± 15.4 years and the male to female ratio was 3:4. 80% of donors were living and the remaining were deceased. The main causes of end stage kidney disease were hypertension (31.3%) and diabetes mellitus (14%). 72 recipients (48%) were non- smokers, and the remaining were either active or ex-smokers. 18% of the non-smokers developed at least 1 pulmonary complication after the operation in contrast to the smokers and ex-smokers group in which the complications were almost twice as common (35.5%). There were 23 (31.9%) patients in the non-smoking group who had either an acute or chronic rejection which was similar to the other group (32.9%). The overall mortality was 7.3% and 81.8% of them were active smokers or ex-smokers. The donors' smoking status was found to play no role in the overall complications, rejections and mortality of the recipients.
Conclusions: This study shows that smoking status of recipients rather than donors plays an important role in the overall mortality and lung-related complications after kidney transplantation but

PO153 HIGH INTRAPATIENT VARIABILITY OF TACROLIMUS EXPOSURE AFTER LIVER TRANSPLANTATION AS NEW MARKER OF POOR OUTCOMES

Cristina Dopazo, Sonia García, Bruno Montoro, Inmaculada Gómez-Gavara, Mireia Caralt, Lluis Castells, Ernest Hidalgo, Ramón Charco, Itxarone Bilbao
Hospital Universitario Vall d´Hebron

Tacrolimus (TAC) is a critical dose drug with a considerable intrapatient variability (IPV) in its pharmacokinetics. The priority is to preserve graft function and patient survival, and to minimize pharmacological adverse events.
Aim: The aim of our study was to evaluate the impact of mean concentration and IPV of trough levels of TAC on outcomes during the first year post-LT.
Methods: A single-center cohort study which analyze retrospectively those adult patients transplanted among 2015–2017 and one year of follow-up. We excluded from the analysis those patients who died within the first month. Because we hypothesized that a high IPV during the first 6 months could result in frequent over-inmunosuppression, the outcome of interest was a composite end point named "event", which consisted of patient death and MRDR < 60 mL/min/1.73 m2 at one year post-LT.The IPV of TAC concentrations was estimated by calculating the coefficient of variation (CV) of whole blood trough concentrations during the first 6 months post-LT.
Results: Ninety two patients were included in the present study.Thirty patients (33%) reached the composite end point "event". One-year renal dysfunction was 27% and one year survival 92%.The median CV during the first month in the group who reached the composite end-point was 47% (*r*:21–98%) versus 48%(*r*:12–135%) in the group who did not reach the composite end-point (*p* =ns).This CV value decreased between 1–3 month post-LT [26%(*r*:2–105%) vs. 26% (*r*:3–82%)](*p* =ns) finding significant differences between 3–6 months [32% (*r*:1–174%) vs. 17% (*r*:2–65%)] (*p* = 0.002).No association was founded regarding rejection rate, however, the multivariate analyses showed pre-LT cardiological disease (OR: 16, *p*: 0.08) and CV > 30% at 6 months post-LT the main risk factor for the composite end-point "event" (OR: 7; *p:* 0.001).
Conclusions: Optimize TAC levels after LT should be the "goal" and IPV can be used as an an easy monitoring tool to help identify identify high-risk patients of poor outcome.

PO155 ANTI-PLATELET THERAPY DOES NOT IMPAIR RESULTS AFTER LUNG TRANSPLANTATION – A LARGE RETROSPECTIVE SINGLE-CENTER ANALYSIS

Stefan Schwarz, Jelena Gligovic, Moritz Muckenhuber, Alberto Benazzo, Bernhard Moser, Jose Matilla, Gyoergy Lang, Shahrokh Taghavi, Peter Jaksch, Walter Klepetko, Konrad Hoetzenecker
Medical University of Vienna

Objective: Patients above 65 years of age are the fastest growing age group in lung transplantation (LTx). This frequently implies patients with various vascular comorbidities such as coronary heart disease requiring anti-platelet therapy. This work aimed to examine results of lung transplantation performed under anti-platelet therapy.
Methods: We analyzed a total of 567 patients who received double LTx in our institution between January 2013 and June 2018. Twenty-five patients were transplanted under platelet inhibitor therapy (group I). The remaining 524 patients were used as a control group (group II). Laboratory parameters, need for blood and coagulation products, as well as incidence of bleeding complications were analyzed.
Results: Preoperative hemoglobin and hematocrit levels, duration of surgery and presence of pleural adhesions were comparable in both groups. All transplantations in the anti-platelet group were performed on central VA-ECMO support. In group II, intraoperative ECMO was used in 393 (72.5%) patients and only 14 LTx (2.6%) were performed without ECLS. In 80 (14.8%) patients of group II, VA-ECMO was prolonged into the early postoperative period, compared to 4 cases in group I.

The need for intraoperative blood products was comparable in both groups (group I vs. group II) for units of erythrocytes ($p = 0.184$), cell saver blood ($p = 0.745$) and units of fresh frozen plasma ($p = 0.363$). However, there was a trend towards a higher need for thrombocyte concentrates (96 ± 183 ml vs. 52 ± 143 ml; ($p = 0.191$)), prothrombin complex concentrates (25% vs. 21.7% of cases; $p = 0.782$) and recombinant Coagulation Factor VIIa (5% vs. 1.3% of cases; $p = 0.258$) in the anti-platelet group. Surgical revision for bleeding was comparable in both groups (2 (8%) vs. 61 (11.4%) patients ($p = 0.999$)).
Conclusions: Anti-platelet therapy should not be a contra-indication for LTx. In selected cases, the procedure can be performed safely without a higher rate of postoperative bleeding complications.

PO156 CLINICAL CORRELATES OF ENDOTHELIAL FUNCTION IN HEART TRANSPLANT RECIPIENTS

Nina Elisabeth Langberg, Katrine Rolid, Kari Nytrøen, Lars Gullestad, Marianne Yardley, Elisabeth Bjørkelund, Dag Olav Dahle
Oslo University Hospital

Background: We aimed to assess the clinical determinants of endothelial function at 2–3 months (baseline) and 1-yr after transplant.
Methods/Materials: Flow-mediated dilatation of the brachial artery was measured by ultrasound and quantified as the percent increase from resting diameter (FMD%), using reactive hyperemia after 5 min of forearm occlusion as stimulus for vasodilatation.
Results: Sixty-eight participants from the HITTS-study (Effect of High-intensity Interval Training in de novo heart Transplant recipients in Scandinavia) were examined at baseline and 65 had a repeat examination after 1-yr. Baseline parameters mean ± SD or *N* (%) were age 48.4 ± 12.9 years, males 50 (74%), body-mass index (BMI) 24.9 ± 3.6 kg/m^2, diabetes 9 (13%), calcineurin-inhibitor 66 (97%), grade 1 or 2 rejection 25 (37%), systolic and diastolic blood pressure 133.4 ± 16.7 and 81.8 ± 10.0 mmHg, respectively, creatinine 119.5 ± 32.0 μmol/L, uric acid 443 ± 116 μmol/L, LDL 2.9 ± 1.0 mmol/L, troponinT 46 ± 39 ng/L, NT-proBNP 1,259 ± 943 pmol/L. FMD% was similar at baseline (9.7 ± 5.7) and at 1-yr (8.7 ± 4.7; $p = 0.11$). Regression models are shown in the table.
Conclusion: FMD% was stable, but the determinants of FMD% varied according to time after transplant. Early determinants of FMD% included recipient age, diabetes and uric acid levels, whereas at 1-yr, systolic blood pressure was the strongest predictor. Surprisingly, a history of CMV-infection was positively associated with FMD%.

Determinants of FMD% 2-3 months after tx			Determinants of FMD% 1-yr after tx	
	Univariable β	Multivariable β	Univariable β	Multivariable β
Age	-.377**	-.431**	-0.281*	-.157
Male	-.166	-.139	-0.142	0.041
BMI	-0.109	.095	-0.209	-0.078
Diabetes	-.320**	-.211*	-0.241	-.207
Systolic BP	-.170	-.193	-0.331**	-.372*
Diastolic BP	-.056	-.033	0.001	.242
Creatinine	-.287*	-.037	-0.111	.168
Uric acid	-.353**	-.405*	-0.098	-.111
LDL	-.241*	-.015	-0.212	-.283
Ln Troponin T	-.139	-.023	-.157	.057
Ln proBNP	-.113	.191	-.249*	-.024
Rejection	-.001	.069	-0.044	-.129
CMV infection	.197	.271*	0.281*	.248

Linear regression models, betas are standardized, *=P<0.05, **=P<0.01. Baseline multivariable model R2=0.49. 1-yr multivariable model R2=0.34. Results were similar when only univariable significant predictors were included in the multivariable model.

PO157 LIVER PERFUSION WITH ENHANCED ANTIBIOTICS REDUCE DONOR-DERIVED INFECTION AFTER LIVER TRANSPLANTATION

Liu Jianrong, Yang Qing, Yang Yang, Zhang Yingcai
The Third Affiliated Hospital, Sun Yat-Sen University

Objective: Donor - derived pathogens causing receptor infection is an increasingly serious problem, because donors became carriers of various pathogens during ICU period. This paper introduces a new method of liver perfusion combined with imipenem and tigecycline, which was first used by our center, to significantly reduce the incidence of receptor infection after transplantation.
Methods: A retrospective analysis was made on Whole liver transplantation patients in our hospital from January 2017 to December 2018.Among them, 79 livers were perfused with UW solution with Gentamicin Sulfate 8 WU (UW-GS). 193 livers were perfused with UW solution with imipenem 1 g and tigecycline 50 mg. (UW-IMI/TIG). The result of microbial culture of liver perfusion solution before and after liver repairment and body fluid of recipients postoperative were compared.
Results: The positive rate of liquid culture before perfusion in UW-GS group was as high as 10.1%, including drug-resistant Acinetobacter baumannii 3.80%, drug-resistant Klebsiella pneumoniae 2.53%, candida 2.5%. After perfusion, the positive rate of liquid culture dropped to 3.80%, including drug-resistant Acinetobacter baumannii 2.53% and drug-resistant Klebsiella pneumoniae 1.27%. After transplantation, the positive rate of microbial culture in patients was 62%. 2.53% of the same strains as the liver perfusion fluid were determined according to the flora analysis. In UW-IMI/TIG group, the positive rate of liver pre-perfusion culture was 9.8%, including drug-resistant Acinetobacter baumannii 2.59%, drug-resistant Klebsiella pneumoniae 3.11%, Candida 1.55%. After perfusion, the positive rate of liquid culture decreased to 2.07%, of which drug-resistant Acinetobacter baumannii was 0.518% and drug-resistant Klebsiella pneumoniae was 0.518%. After transplantation, the positive rate of microbial culture in patients was 19.2%. Among them, three patients with positive Klebsiella pneumoniae were considered to be caused by nosocomial transmission infection. According to the analysis of flora, 0.518% strains with the same source as liver perfusion fluid were identified.
Conclusion: Liver perfusion with tigecycline and imipenem during liver repair can effectively reduce donor-derived pathogenic bacteria, reduce the infection rate after recipient transplantation, and facilitate the smooth recovery of recipient after surgery.
Keywords: heart/brain death, organ donation, liver transplantation, drug resistant bacteria:

PO158 A SYSTEMATIC LITERATURE REVIEW OF CYTOMEGALOVIRUS (CMV) AND EPSTEIN-BARR VIRUS (EBV) CO-INFECTION RATES AND OUTCOMES IN POST-TRANSPLANT PATIENTS

Colin Anderson-Smits[1], Erin Baker[2], Ishan Hirji[1]
[1]Shire, a Takeda company; [2]CTI Clinical Trial & Consulting Services

Background: Post-transplant infections carry a heavy patient burden. Several studies have indicated an increased risk of complications among SOT or HSCT recipients by viral CMV/EBV co-infection status. To date, no systematic literature reviews on the topic are published.
Methods: A systematic literature review was conducted to summarize reports of CMV/EBV co-infection. Publications from 2010 to October 2018, in English, reporting on the rate of co-infection or the outcomes of co-infected patients following either SOT or HSCT were eligible for inclusion. 314 publications were screened; 294 were excluded due to lack of reporting on CMV/EBV. Seven met all inclusion criteria and were further analyzed. Due to limited reporting/heterogeneity, data were not meta-analysable.
Results: Seven studies reported CMV/EBV co-infection: 5 SOT (4 renal, 1 liver), 2 HSCT. Rate of co-infection in SOT varied from 3–21%. Rate of CMV infection post transplant was time dependent (18% at 21 days, 17–21% at 1 year, 47% at 3 years), yet was modified by co-infection status. Two studies indicated CMV re-activation to be an independent variable associated with EBV re-activation. Among SOT studies, patients with co-infection tended to have higher rates of graft dysfunction (47% vs. 23%), rejection episodes (20% vs. 12%) or acute rejection (50% vs. 31%), and high rates of other opportunistic infections (41%). In HSCT studies, patients with graft versus host disease were not reported separately for co-infection. 92% of patients with post-transplant lymphoproliferative disorders (PTLD) had CMV/EBV co-infection.
Conclusion: CMV/EBV co-infection rate varies and is associated with changes in viral activation, timing and complications such as PTLD, rejection and dysfunction in both HSCT and SOT recipients. Further research is needed to better understand the clinical burden, association of co-infections and PTLD, as well as the role of treatment agents for patients with CMV/EBV co-infection.

PO159 THE TYPE OF DIALYSIS INFLUENCE THE CMV-SPECIFIC CD8 + T CELLS FREQUENCY IN KIDNEY TRANSPLANT PATIENTS

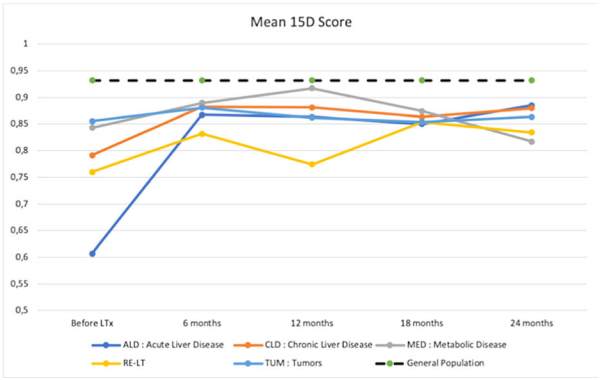
Jose Ramon Vidal-Castineira[1], Liselotte Brix[2], Carmen Diaz-Corte[3], Carlos Lopez-Larrea[1]
[1]Translational Immunology Laboratory, ISPA, Hospital Universitario Central de Asturias, Oviedo; [2]Immudex; [3]Nephrology Service, Hospital Universitario Central de Asturias, Oviedo

Background: Patients in hemodialysis (HD) suffer more severe complications compared to those in peritoneal dialysis (PD). The risk of Cytomegalovirus (CMV) infection increases following kidney transplantation due to immune suppression and can lead to severe CMV disease. The aim of this study was to evaluate the levels of CMV-specific CD8 + (CMV+CD8 +) T cells in a cohort of Kidney transplant patients receiving HD or PD.
Methods: Sixty-nine unrelated patients from the Hospital Universitario Central de Asturias (Oviedo, Spain) were enrolled and classified according to the type of dialysis they received. 42 patients underwent kidney transplantation and were followed up for 1 year. CMV serostatus and the CMV DNA were determined as a part of the current routine clinical practice in the Microbiology Service. The Dextramer CMV Kit (Immudex, Denmark) was used to determine the level of CMV+CD8 + T cells in blood pre- and post- transplant (Day 15, 45, 60, 90, 120, 15, 180, 360). Memory CD8 + T cell subsets were analyzed by flow cytometry.
Results: Fifty-eight percent of patients ($n = 40$) were in HD and 37.8% ($n = 26$) in PD. The remaining patients ($n = 3$, 4.2%) were in pre-dialysis. HD patients had fewer CMV+CD8 + T cells than those in PD ($p < 0.01$). Patients on waiting list in PD had more CMV+CD8 + T cells during the follow-up period than those in HD ($p < 0.05$), independently of the CMV viral load. The differences were greatest after 90 days and equalized by 360 days. The CMV+CD8 + T cell frequency at the various times studied were higher for PD patients than those of HD patients. Compared to HD patients, PD patients had a higher frequency of CD8 + TEMRA T cells (mean PD (45.6), HD (32.7)) and a lower frequency of Central Memory cells (mean PD (19) vs. HD (8.2)).
Conclusion: These results indicate the better status of CMV-specific T cell immunity in PD patients. The use of CMV Dextramer assay is advantageous for monitoring the CD8 + CMV-specific response, enabling the use of prophylactic treatment to be optimized.

PO160 PROSPECTIVE 2-YEAR FOLLOW-UP STUDY OF HEALTH-RELATED QUALITY OF LIFE OF LIVER TRANSPLANTATION PATIENTS

Marko Vannas, Martti Färkkilä, Fredrik Åberg, Helena Isoniemi
Helsinki University Hospital

Introduction: Liver transplantation (LTx) is an important treatment option in liver diseases and in most cases exists no alternative curative options. Many studies focus on improved patient survival after LTx, and indeed this can be considered to be a prerequisite for LTx. The effect of LTx on the health-related quality of life (HRQoL) has not been extensively studied, especially the mid to long term effects.
Patients and methods: A prospective single center study of adult patient HRQoL was launched in 2007. HRQoL was measured using the generic self-administered 15D instrument. Patients were enlisted between 2007 and 2011. HRQoL results were collected before LTx and at 6, 12, 18 and 24 months of follow-up.
Results: Total of 100 patients were initially enrolled and 76 completed the 24-month follow-up questionnaire. There were 66 chronic liver (CLD), 15 acute liver (ALD) and seven metabolic disease (MED) patients. Four patients were re-transplants and eight patients were transplanted due to tumor with cirrhosis. Metabolic and tumor group had the highest HRQoL score before LTx and CLD group had slightly lower score. The ALD group had clearly lower results. HRQoL clinically improved at 6 months in all groups. In ALD and CLD



improvement was statistically significant ($p = 0.036$ and $p = 0.000$). There was no further improvement in ALD and CLD patients at 12 months, MED patients did continue to improve further at this point. At 24 months ALD patients HRQoL score had further improved but all other patient groups had either stayed the same or lowered HRQoL score from 6 months measurement. None of these changes reached statistical significance. Compared to the general population, the LTx patients had lower mean score at all points.
Conclusions: The improvement on HRQoL was seen already at 6 months HRQoL score remained clearly higher in ALD and CLD patients at 2-year follow-up compared with the results before LTX.

PO161 ULTRASOUND GUIDED TRANSPERITONEAL FENESTRATION FOR SYMPTOMATIC POST RENAL TRANSPLANT LYMPHOCELE – A SAFE EFFECTIVE ALTERNATIVE TO SURGERY

Anna Krarup Keller, Ulla Moeldrup, Arne Hoerlyck, Steffen Ellebaek Petersen, Jan Solvig
Aarhus University Hospital

Background: Symptomatic post renal transplant lymphoceles are predominantly treated with open or laparoscopic marsupialization to the peritoneal cavity. We present 21 patients treated with ultrasound guided transperitoneal fenestration.
Methods: Peritoneum was filled with 2–4.5 L saline by an ultrasound-guided puncture. The patient was placed in anti-Trendelenburg position, and a 14 Fr SKATER™ Biliary Drainage Catheters was safely positioned in the lymphocele through the peritoneal cavity thus forming a transperitoneal fenestration verified by continuous ultrasound and x-ray guidance. The external part of the catheter was shortened, closed, and sutured to the fascia through a small incision. The catheter was removed after successful lymphocele regression and fistula formation to peritoneum, evaluated by ultrasound.
Results: Twenty-one patients (age: 45, 10 M, 11 F) with lymphoceles causing graft hydronephrosis were treated 0.5–4 months after renal transplantation. This procedure was technically feasible in all patients, when carried out under general anesthesia. Two patients had the catheter removed after 14 days due to fever with unknown cause. In the remaining 19 patients, the drain was removed after 2.5–10 months when ultrasound had confirmed the symptomatic lymphocele was resolved. The procedure was repeated in one patient due to multiple lymphoceles. No lymphocele surgery was performed in any renal transplant patients in our department.
Conclusion: Ultrasound guided transperitoneal fenestration of symptomatic post renal transplant lymphoceles is a safe and well-tolerated procedure with high success rate and low recurrence rate when carried out by experienced radiologists.

PO163 NORMOTHERMIC MACHINE PERFUSION FOR URGENT GRAFT REALLOCATION. A CASE REPORT

Daniele Pezzati, Rebecca Aglietti, Erion Rreka, Erica Pieroni, Valerio Genovese, Sonia Meli, Gabriele Catalano, Davide Ghinolfi, Paolo De Simone
University of Pisa Liver Transplant Center

Background: Normothermic machine perfusion (NMP) is a novel preservation technique that has been used in a limited number of liver transplant (LT) procedures and clinical trials. Whilst its usage has been implemented to decrease ischemia/reperfusion injury (I/R) of the graft, a few cases of preservation for reallocation have been reported.
Materials & methods: A 40-year-old male donor was offered to our center for LT. The recipient was a 52-year-old male affected with primary sclerosing cholangitis. At laparotomy, a biopsy-proven extrahepatic cholangiocarcinoma with nodal extension, undetected on pretransplant CT-scan, was found. The transplant procedure was aborted, and the graft was re-allocated to a 63-year-old male affected with hepatocellular carcinoma and HCV. Due to an anticipated cold ischemia time (CIT) longer than 12 h, the graft was perfused with NMP using Liver-Assist® with a blood-based perfusate.
Results: NMP lasted 245 min and total CIT was 505 min. Temperature was gradually increased from 22°C to 37°C over 20 min. Mixed air was delivered at 4 L/min with 30% O2 and adjusted based on gas analysis. The hepatic artery and portal vein flows and pressures were 300 ml/min and 1,000 ml/min, and 70 mmHg and 7 mmHg respectively at 1 h and remained stable thereafter. Lactate decreased from 7.9 to 2.1 mmol/L after 60 min and to 0.9 at the end of NMP. The graft produced 10 ml of bile during NMP. AST and ALT levels were stable at 1,300 and 1,700 UI/L, respectively, during NMP. The recipient did not suffer from post-reperfusion syndrome. Posttransplant AST and ALT peak was 1,738 and 1,347 UI/L, respectively, and normalized on post-operative day (POD) 4. Bilirubin peak was 5.02 mg/dl and normalized on POD 12. The length of stay was 21 days due to calcineurin inhibitors-related neurotoxicity requiring switch to everolimus. At a follow-up of 3 months patients is staring well.
Conclusions: : NMP can be used for urgent graft reallocation with favorable outcome.

PO164 CORRELATION BETWEEN HOMOCYSTEINE BEFORE AND AFTER RENAL TRANSPLANTATION

Na Xue
First Affiliated Hospital of Xi'an Jiaotong University

Background: The aim of this study was to investigate the role of plasma homocysteinemia (Hcy) levels and its influencing factors, the incidence of hyperhomocysteinemia(HHcy, and elevated plasma Hcy levels in renal transplant patients with atherosclerotic cardiovascular disease complications before and after renal transplantation.
Methods: The literature review method was used to retrospectively study the Hcy related literature before and after renal transplantation, and combined with clinical epidemiological knowledge and clinical practice of our center, the relevant data were analyzed in an integrated manner.
Results: Hcy which has been identified as one of the independent risk factors plays a very important role in the pathogenesis of atherosclerosis and thromboembolic diseases such as cardiovascular and cerebrovascular diseases and venous thrombosis, and its pathogenesis is also multifaceted. Firstly, increased levels of Hcy are associated with stroke, premature arteriosclerosis, myocardial infarction, and venous thromboembolism. Secondly, patients with kidney disease are often associated with hyperhomocysteinemia. Affected by metabolic or excretion disorders, nutritional deficiencies, genetics and other factors, Hcy levels before and after renal transplantation are increasing, decreasing, and rebounding. As far as the overall level of Hcy is concerned, statistics show that men have higher values than women. Thirdly, renal function is an important factor in determining the level of Hcy in serum. Compared with the value of serum creatinine, the level of Hcy is more sensitive to the degree of renal function.
Conclusion: Hcy levels can be used as an important indicator for monitoring cardiovascular disease in kidney transplant patients. The Hcy level of renal transplant recipients is related to the function of graft. The combined detection of Hcy and renal function has certain guiding significance for preventing HHcy and early evaluation of graft function.

PO167 EFFECT OF THALIDOMIDE AND DEXAMETHASONE CO-TREATMENT ON CD8 + T CELLS

Joon Ye Kim[1], Eun Jee Kim[1], Hyo Jung Lee[1], Yuri Cho[1], Myoung Soo Kim[2], Yu Seun[2], Kyu Ha Huh[2], Beom Seok Kim[3]
[1]The Research Institute for Transplantation, Yonsei University College of Medicine; [2]Department of Transplantation Surgery, Yonsei University Health System; [3]Nephrology Division, Department of Internal medicine, Yonsei University Health System

Thalidomide (TM) is known to have anti-cancer and anti-inflammatory effects and dexamethasone (DX) has been reported that it also reduces inflammation and inhibits inflammatory cytokine production. We have shown that TM and DX combinatorial treatments have immune-modulatory functions and affect each $CD4^+$ T cell subset differently and specifically, by regulating the expression of co-stimulatory molecules on $CD4^+$ T cells. Therefore, we examined TM/DX combinatorial effects on $CD8^+$ T cells to compare $CD4^+$.

Sort purified CD8 T cells isolated from C57BL/6 mice were plated on 96-well plates with TM and DX. Following incubation with the drugs, cells were collected and OX40, glucocorticoid-induced tumour necrosis factor receptor-related protein (GITR), programmed cell death-1 (PD-1) and cytotoxic T lymphocyte associated antigen-4 (CTLA-4) expression was quantified by flow cytometry.

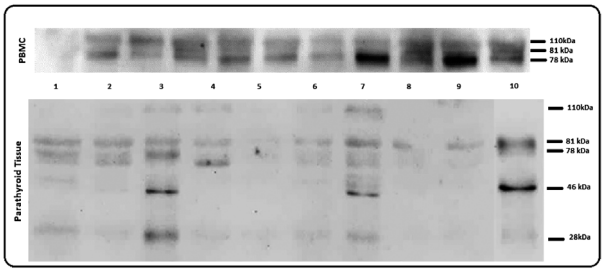
TM significantly decreased the viability of $CD8^+$ T cells in a dose-dependent manner and showed synergistic effect of combinational treatments with low dose of dexamethasone. Their proliferations were shown decrease manner but not significantly. Moreover, combinational treatments ameliorated the decrease of GITR and OX40 expressions which were required for CD8 T cell expansion or enhancement of its function. PD-1 and CTLA-4 expressions were not changed by TM/DX stimulation.

Considering the results and the previously reported our data, we suggest that TM/DX combinatorial treatment plays enhanced immune-modulatory role by selectively suppressing $CD4^+$ effector T cell proliferation and $CD8^+$ T cell viability. Compared to immunosuppresant drugs, which reduce T cell and immune cell populations regardless of their subsets or types, TM/DX combinatorial treatment showed clear modulating effects and can be potentially used as a viable immune-modulatory therapy following transplantation. Further study will be conducted, to determine the underlying molecular links between the TM/DX's effects and immune cells.

PO168 MINOR HISTOCOMPATIBILITY ANTIGEN SP110: AN EVOLUTIONARY TRACE FOR PARATHYROID TISSUE

Beyza Goncu[1], Emrah Yucesan[2], Ufuk Oguz Idiz[3], Burcu Ozdemir[1], Fahri Akbas[1], Erhan Aysan[4], Yeliz Emine Ersoy[5], Nur Ozten Kandas[6]
[1]Bezmialem Vakif University, Experimental Research Center; [2]Bezmialem Vakif University, Institute of Life Sciences and Biotechnology; [3]Sisli Etfal Training and Research Hospital, Department of General Surgery; [4]Yeditepe University, Faculty of Medicine, Department of General Surgery; [5]Bezmialem Vakif University, Faculty of Medicine, Department of General Surgery; [6]Bezmialem Vakif University, Faculty of Pharmacy, Department of Pharmaceutical Toxicology

Background: Limited survival rate of parathyroid allotransplantation (PA) requires to search for an immune biomarker which is possibly an evolutionary trace.Parathyroid glands are closely associated with thymic primordia, hence both tissues detach together from the pharyngeal wall. In addition, minor histocompatibility antigens (MiHAs) in transplantation are sufficient to trigger rejection.Biological relevance of MiHAs could indicate a possible candidate for PA as well.In this study, autosomal-restricted minor histocompatibility antigen Sp110 was evaluated in parathyroid tissues.
Methods/Materials: Parathyroid hyperplasia tissue was obtained from patients diagnosed with secondary hyperparathyroidism ($n = 10$).After histopathological confirmation, protein samples were extracted for detection of Sp110 peptide level.According to literature, Sp110 expressed in 193 organs, and the highest expression level in blood.Therefore we used peripheral mononuclear cells (PBMC) as a positive control. A 100 Âµg sample of total protein extract was separated on 4–17% SDS-polyacrylamide gels and transferred to 0.2Âµm PVDF membranes.Sp110 levels for different isoforms were evaluated by Western blot.Â
Results: We showed that parathyroid hyperplasia tissue of each sample contains different isoforms for Sp110 (UniProt ID: Q9HB58) .Five tissue were positive for isoform-1 (78 kDa),3 tissue were positive for isoform-2 (46 kDa), 4 tissue were positive for isoform-4 (28 kDa) and 6 tissue were positive for isoform-6 (81 kDa).Â
Conclusion: Sp110 is an interferon-induced nuclear protein and contain seven different isoforms. Sp110 previously reported as related to HLA-A*03 directly.Besides, Sp110 is an important molecule for HLA class I-restricted rejection cases of PA.Consequently, HLA class-I mediated rejection causes limited survival rate according to our five-year PA experience.Thus future studies should be confirmed that Sp110 might be possible biomarker possible biomarker prior to transplantation.



PO169 EFFECT OF LIVER TRANSPLANTATION ON NEUROLOGICAL MANIFESTATIONS AND BRAIN MAGNETIC RESONANCE IMAGING FINDINGS IN WILSON DISEASE

Ebru H. Ayvazoglu Soy[1], Ruhsen Ocal[2], Sibel Benli[2], Fuldem Donmez[3], Muhtesem Agildere[3], Serkan Ocal[4], Mehmet Haberal[1]
[1]the Department of Transplantation, Faculty of Medicine, Baskent University, Ankara; [2]the Department of Neurology, Faculty of Medicine, Baskent University, Ankara; [3]the Department of Radiology, Faculty of Medicine, Baskent University, Ankara; [4]the Department of Gastroenterology, Faculty of Medicine, Baskent University, Ankara

Introduction: Wilson disease (WD) is an autosomal recessive disorder of copper metabolism, After liver involvement, neurologic symptoms appear in 2–5 years, usually as movement disorders. Liver transplantation (LT) is the treatment choice of WD in case of liver failure and when the patient does not respond to pharmacological treatment. LT is known to be effective in evolving the life quality of especially neurologic WD patients. In our study we evaluated WD patients for the differences in preoperative and postoperative neurological and radiological findings following LT.
Methods: Since 1988, we performed 627 LT in our centers. 53 patients had LT for WD. Here in this study, we included 15 adult WD patients that we achieved to have both pre LT and post LT neurological and radiological data. All these patients were evaluated before and after LT by the same neurologist and radiologist. The tremor is scored by the glass scale test. Radiological evaluation is performed by cranial magnetic resonance imaging (MRI).
Results: We procured the pre LT and post LT neurological and radiological data of 15 WD patients. In post LT controls, significant recovery in cranial MRI findings and neurological manifestations were seen in 11 patients. In post LT controls, no significant recovery in cranial MRI findings were seen in 3 patients, but neurological manifestations were regressed in all of them. Newly onset tremor was seen in 1 patient after LT. However there was a significant recovery in cranial MRI findings of this patient and so this was thought to be due to side effects immunosuppressive therapy
Conclusion: Neurological recovery and radiological regression can be achieved by LT, and as such is effective in improving the quality of life of WD patients. Our study has one of the largest series about post LT recovery of WD.

PO170 PAEDIATRIC COMBINED LIVER AND KIDNEY TRANSPLANTATION – ARE WE READY TO BREAK THE ODDS AND GO FOR A UNIFORM CONSENSUS?

Evgenia Preka[1], Marianne Samyn[2], Nizam Mamode[3], Sheila Boyle[1], Stephen D. Marks[1], Jelena Stojanovic[1]
[1]Great Ormond Street Hospital for children NHS Foundation Trust; [2]Liver Transition Service, Kings College Hospital London, London; [3]Department of Transplantation, Guy's and St Thomas' NHS Foundation Trust, London

Aim: Primary hyperoxaluria type 1 (PH1) is a rare genetic paediatric disease with no universal evidence-based guidelines.Evidence in combined liver-kidney transplantation (CLKT) for PH1 in children is limited and variable.We report a complicated PH1 paediatric case who had an excellent outcome, despite a different management.
Methods: A 10 year-old male with end-stage kidney disease (ESKD) secondary to PH1 diagnosed at age 5 years after presenting with chronic kidney disease and anaemia underwent CLKT.He had severe systemic oxalosis with bone marrow failure, transfusion-dependent anaemia and uncontrolled hypertension on three anti-hypertensive medications and thrice weekly haemodiafiltration (HDF).Haemoglobin (Hb) levels were maintained above 70–75 g/L, with three weekly red blood cell transfusions.Subsequently, he developed haemosiderosis requiring iron chelation therapy.Blood pressure (BP) measurements were above the 95thcentile despite three anti-hypertensives and three-weekly HDF.
Results: We decided not to perform bilateral nephrectomies before/during the transplantation.He received a CLKT from a deceased donor without peri-operative complications.Continuous veno-venous haemodiafiltration (CVVHDF) was commenced at the time of liver implantation and continued for only 48 h with primary renal allograft function.He maintained urine output > 1 ml/kg/hr with a fluid target of 3–3.2 litres/day since day 1 post transplant and potassium citrate as urinary alkalization.He had no episodes of acute rejection or nephrocalcinosis with estimated glomerular filtration rate of 60mls/min/1.73 m2 at six-month follow-up post-transplantation on prednisolone and azathioprine due to multiple infections.He is normotensive, off anti-hypertensives and without need for blood transfusion.
Conclusion: At 9 months follow-up, the patient presents an excellent liver and renal allograft function without any signs of nephrocalcinosis, resolution of the transfusion-dependant anaemia and normal BP.

PO171 LIGHT CHAIN DEPOSITION DISEASE IN A KIDNEY TRANSPLANT RECIPIENT: A CASE REPORT

Sophia Lionaki, Irine Vekri, Ioanna Vlahadami, Chrysovalantis Vergadis, George Liapis, John Boletis
Laiko Hospital

Case description: A 72 year-old kidney transplant recipient (KTx), with a past medical history of arterial hypertension, diabetes mellitus and a baseline serum creatinine of 1.8 mg/dl (eGFR:39 ml/min/1.73 m2) presented with weakness, anorexia and weight loss during the last three months. He was transplanted from a deceased donor eighteen years before and had been in dialysis for ten years prior to KTx. The primary cause of end stage renal disease was unknown. Physical examination was significant for pitting edema in the lower extremities and laboratory workup for graft function deterioration, anemia and worsening proteinuria. Cardiac evaluation was not altered since his last visit. Workup for anemia revealed monoclonal gammopathy (IgG/λ) with limited plasma cell infiltration (8%) in the bone marrow examination, consistent with monoclonal gammopathy of unknown significance. Based on these results and the worsening renal function, a graft biopsy was performed. The histopathological diagnosis was light chain deposition disease in the graft along with advanced chronic lesions, which were already known from a previous biopsy 2 years before. A total body computed tomography didn't not reveal any bone lesions. Repeat of the myelogram, 3 months later, showed no alteration in the plasma cell infiltration, while treatment with epoetin resulted in full recovery of anemia. Since the patient already had chronic kidney disease in the graft and the absence of extra-renal myeloma manifestations, he did not receive any

specific therapy, apart from systematic hematologic evaluation ever three months.

labs	Base line	Clinical presentation	Kidney biopsy	End of follow up
Serum Creatinine (mg/dl)	1.84	2.62	3.55	4.25
eGFR (MDRD) ml/min/1.73 m2	39	26	18	15
Serum albumin (g/dl)	4.1	3.4	3.4	4.1
24 h-urine protein (g)	1.2	3.9	3.1	2.4
Kappa/Lamda ratio		0.65	0.71	0.61
Hb (g/dl)	11.2	8.9	10.7	11.2
PLT	237.000	215.000	240.000	283.000
WBC	5.000	5,610	3.990	6.880

PO172 CANCER INCIDENCE AFTER KIDNEY TRANSPLANTATION IN SAUDI ARABIA

Hassan Aleid, Syed Raza, Tariq Ali, Dieter Broering, Ibrahim AlAhmadi
King Faisal Specialist Hospital

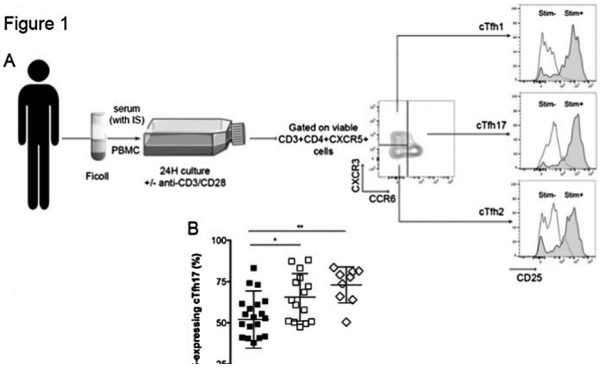
In the current era of renal transplantation the patient and graft survival are continuously improving. However there are some factors that are counterbalancing the effect of such success. One such factor is post renal transplant malignancies (PRTxM). The longer the patient survival is with functioning allograft, the higher is the risk of developing malignancy. In this present study we describe our experience of PRTxM among 2,981 renal transplants performed in our centre.
Material and methods: We performed retrospective analysis of prospectively collected data of 2,981 renal transplant performed at King Faisal Specialist Hospital and Research Centre KSA between 1981 and 2016 with a median follow-up period of 153 months. We studied incidence and outcome of PRTxM among these patients. Statistical analysis was carried out using the Statistical Package for the Social Sciences (SPSS 21). Non-variables were analyzed using the T-Test, and variables were analyzed by means of the Fisher exact test and Chi square test. We also analyzed for relative risk ratio among different factors. Survival analysis was conducted using Kaplan-Meier survival graphs and log-rank testing was used where differences in survival were significant. In general, a p value of < 0.05 was considered statistically significant for the purpose of our study.
Results: Overall there was 4.2% ($n = 125$) incidence of post renal transplant malignancies recorded in our patients with equal distribution among pediatric and adult recipients [RR 1.0106; 95% CI 0.5927 to 1.7231; $p = 0.96921$. The median time from transplant to malignancy was 53 months. Non-cutaneous carcinomas ($n = 42$) were the commonest malignancy followed by PTLD ($n = 33$) [Table I]. The incidence of PTLD was

PO173 RESIDUAL ACTIVATABILITY OF CIRCULATING TFH17 PREDICTS HUMORAL RESPONSE TO THYMODEPENDENT ANTIGENS IN PATIENTS ON THERAPEUTIC IMMUNOSUPPRESSION

Suzan Dahdal[1], Carole Saison[1], Martine Valette[2], Bruno Lina[2], Alice Koenig[1], Guillaume Monneret[3], Thierry Defrance[1], Emmanuel Morelon[1], Olivier Thaunat[1]
[1]Inserm U111-CIRI & Hospices Civils de Lyon, Dept. of Transplantation Nephrology and Clinical Immunology, E. Herriot Hospital; [2]Hospices Civils de Lyon, Virology Laboratory, Croix Rousse Hospital, Lyon; [3]Hospices Civils de Lyon, Immunology Laboratory, Edouard Herriot Hospital, Lyon

Introduction: The generation of antibodies against protein antigens requires that T follicular helper cells (Tfh) provide help to B cells. Immunosuppressive (IS) drugs prevent T cell activation, yet renal transplant patients develop donor-specific antibodies (DSA), which suggests that IS drugs do not efficiently block their T follicular helper cells.
Methods: To test this hypothesis, the number of circulating Tfh, their polarisation profile, and ability to up-regulate i) the costimulatory molecules CD40L and ICOS, and ii) the activation marker CD25, following in vitro stimulation in presence of IS drugs (Fig 1A), were compared between 36 renal transplant patients (6–72 months post transplantation) and 9 healthy controls.
Results: IS drugs reduced the number of Tfh1 and 2 but had little impact on Tfh17, which was the dominant subset in transplant patients. Although IS drugs decreased activation-induced expression of costimulatory molecules by Tfh, the impact was highly variable between individuals. Furthermore, 20% of transplant patients displayed normal expression of CD25 on Tfh following in vitro stimulation (i.e. "residual activatability"). To test whether residual activatability of Tfh correlates with antibody response against thymo-dependent antigens we took advantage of the 2015 influenza vaccination campaign, which provided a normalized setting for antigenic stimulation. In line with our hypothesis, responders to influenza vaccine exhibited significantly higher percentage of CD25-expressing Tfh17 after in vitro stimulation. A result that was confirmed retrospectively in 9 transplanted patients at the time of first DSA detection (Fig 1B).
Conclusion: The "residual activatability" of Tfh17 might be used as a non-invasive biomarker to identify transplant patients at risk to develop DSA under immunosuppression. If validated on larger studies. this assay might help optimizing the prevention of DSA through personalised adaptation of immuno-suppressive regimen.

Figure 1



PO174 MEMBRANOUS NEPHROPATHY AFTER KIDNEY TRANSPLANTATION: RELAPSE RATES AND LONG-TERM OUTCOMES IN THE GRAFT

Sophia Lionaki, Sophia Akritidou, Ioannis Gavalas, George Liapis, Alice Iniotaki, George Zavos, John Boletis
Laiko Hospital

Objectives: To describe the course of idiopathic membranous nephropathy (MN) after kidney transplantation (KTx), estimate the frequency of disease relapse and the long-term outcomes.
Methods: We retrospectively studied the medical charts of 19 patients with idiopathic MN as primary disease, who were transplanted in our hospital. All had biopsy proven MN. Demographics and characteristics related to donors and recipients at the time of KTx were recorded, including, dialysis time, immunosuppressive schemes, histocompatibility data, acute rejection episodes, patient and graft survival, and eGFR at the end of the follow up time. All relapses of MN were recorded in conjunction with the treatment and the response to it. Exclusion criteria were KTx incompatible for the ABO system, major surgical complications during the 1stmonth or non-adherence issues. All patients with relapsing MN in the graft were initially treated with fosinopril and depending on the response or not were treated with the Ponticelli protocol or more recently with rituximab.
Results: Nineteen patients, who ended in ESRD due to idiopathic MN, received a graft between 1990 and 2018. The mean age at the time of KTx was 49.5 ± 12.5 years and 15 (78.9%) of them were males. The mean time in dialysis was 63.2 (±51.5) months, the graft was from deceased donors in 14 cases (73.7%), with a mean donor age of 46 (±15.46) years. During a follow up time of 84.97 (±57.6) months, 11 patients (58.9%) experienced at least one episode of MN relapse. Time to relapse was 45.6 (±42.7) months and 24-h proteinuria was 4.81 (±2.88) grams. Three patients experienced acute rejection, 2 of them concurrent with the MN relapse. At the end of the follow up time, patients' survival was 100%, graft survival was 88.5%, with a mean serum creatinine of 1.8 (±0.23) mg/dl, eGFR of 60.84 (±27.3) ml/min/1.73 m2 and mean 24-h proteinuria of 0.75 (±0.58) grams.
Conclusion: Relapse of idiopathic MN in the graft is not rare, but in most.

PO175 LOW REJECTION RATES AND RENAL OUTCOMES IN HIV-INFECTED KIDNEY TRANSPLANT RECIPIENTS

Sheila Cabello Pelegrin, Gonzalo Gómez Marques, Ana Cristina Tugores Vazquez, Natalia Allende Burgos
Nephrology Department. Hospital Universitari Son Espases

Background: Kidney transplantation (KT) is safe and effective in HIV patients with end stage renal disease. One-year rejection rates in HIV-infected KT recipients range from 15–40%, compared to 10% in HIV-negative patients. Protocols for immunosuppression and highly active antiretroviral therapy (HAART) regimens in this population vary substantially between transplant programs. The potential for significant drug-drug interactions and choice of induction therapy may influence outcomes.
Methods: A single center observational cohort study was performed from October 2014 through March 2018 with 5 patients. All the patients with

controlled for viral load, CD4 count > 250/[micro]L and stable HAART regimen for at least 6 months before KT. Outcomes included patient survival, graft survival, and kidney function.
Results: Five patients were identified with a median age of 47.5 years, 4 male and 1 female. The most common cause of renal failure was uncertain etiology (60%), followed by hypertensive nephrosclerosis (20%), and the median duration of pre-transplant dialysis was 2.5 ± 1.7 years.

All patients received IL-2 receptor antagonist induction;3 patients with Tacrolimus (Tac) and Everolimus and 2 patients with Tac and micofenolate mofetil as maintenance immunosuppressive therapy. The HAART regimen in 4 patients was Dolutegravir/Abacavir/Lamivudine, whereas in the other one it was Dolutegravir/Rilpivirine

A biopsy was performed in 4 patients and no acute rejection or subclinical rejection was observed; neither did any develop de novo DSAs (donor specific antibodies) after transplant. For the other patient, kidney function was perfect and no biopsy was carried out.

One-year allograft and graft survival was 100% (similar to non-HIV group, $p = 0.031$). Mean kidney function at 1-year using CKD-EPI was 47.13 ± 24.8 ml/min.
Conclusions: In our small cohort, the ratio for acute rejection was 0%, lower than other published rates. KT outcomes in HIV+ recipients are similar to non-HIV negative recipients

PO176 APPLICATION OF AN EXTENDED-RELEASE TACROLIMUS FORMULATION (ENVARSUS®) ALLOWS FOR DOSE REDUCTION AND STABILIZES GRAFT FUNCTION FOLLOWING LIVER TRANSPLANTATION

Peri Husen[1], Alexandra Frey[2], Fuat Saner[1], Anne Hoerster[2], Andreas Paul[1], Heiner Wedemeyer[2], Kerstin Herzer[2]
[1]Department of General, Visceral and Transplantation Surgery, University Hospital Essen; [2]Department of Gastroenterology and Hepatology, University Hospital Essen

Background: The combination of immunosuppressive (IS) drugs administered after liver transplantation (LT) mostly comprises of the calcineurin inhibitor (CNI) Tacrolimus (Tac). However, its low bioavailability can be a challenge. Bioavailability of the extended-release Tac formulation Envarsus® (ENV) is about 40 % higher than the rapid-release Tacrolimus, Prograf®, allowing for a dose reduction of up to 30 %. Following dose reduction, the decreased incidence of adverse events can be anticipated. In this study we examined the tolerability of Envarsus®, in a large real-world cohort of patients following LT.
Methods: Clinical and laboratory data from 150 LT recipients who were switched from a Tac to an ENV-based IS regimen at our center were collected and analyzed retrospectively. Currently, all patients have reached an observation period of 6 months.
Results: The most prevalent reason to administer ENV was the intention to reduce nephro- and neurotoxic CNI effects. Following the start of ENV administration, liver values (GOT 22 (10–534) U/L, GPT 23 (8–197) U/L, GGT 24 (7–660) U/L, bilirubin 0.2 (0.1–2.2) mg/dl) and renal function (S-creatinine 1 (0.55–3.16) mg/dl) of all patients remained stable at 6 months. Sleep, concentration and tremor disorders improved in all patients after conversion from Tac to ENV. Within the group of patient who were determined fast Tac metabolizers ($n = 67$), the ENV dose could be reduced by up to 25 % ($p \leq 0.003$). ENV had to be discontinued in 6 % ($n = 9$) of all patients, not related to deteriorated renal or liver function.
Conclusion: ENV has no negative impact on liver and kidney function. In approximately 50 % of the fast metabolizers the daily Tac dose could be reduced significantly upon switching to ENV, thus decreasing the risk of side effects and facilitating tolerability in the long term.

PO177 THE INFLUENCE OF LONG-DISTANCE (UP TO 3,500 KM) LIVER TRANSPORTATION ON COLD ISCHEMIA TIME, INITIAL GRAFT FUNCTION AND TRANSPLANT OUTCOMES

Alexander Sushkov, Konstantin Gubarev, Vladimir Rudakov, Daria Svetlakova, Alexey Fedyunin, Ivan Murashov, Artur Zakhlevny, Viktor Vinogradov, Alexey Artemiev, Sergey Voskanyan
Burnasyan State Research Center

Background: Russia is the largest country in the world (17 million square kilometers), therefore, the issues of donor organs transportation over long distances are very important.
Objective: To determine the proportion of organ transportation time (OTT) in the cold ischemia time (CIT) and their impact on liver transplant (LT) outcomes.
Materials and methods: Seventy-one cases of deceased (brain-dead) donor LT were performed since 2012 to 2018 in the transplant center. Grafts were obtained from 19 donor hospitals located at a distance of 0 (in-hospital) to 3,500 kilometers. Transportation was carried out by ground medical transport or regular passenger flights. All cases are divided into two groups: CIT < 9 h or CIT ≥ 9 h and compared.The values are presented as median [25–75%], (min–max) or as absolute count and %. Non-parametric statistical criteria were used. Recipient survival was estimated by Kaplan-Meier with a 95% confidence interval (CI)
Results: OTT determines 44% [36–56%] of CIT. Statistically significant correlation between distance and CIT is obtained only when using aircrafts (Spearmen $R = 0.31$, $p < 0.05$). CIT without OTT was significantly longer when using passenger flights 4.7 h [3.9–5.8] versus 3.8 h [2.8–4.5] - for ground transportation, $p = 0.015$. Probably this is due to the passage of pre-flight procedures, boarding and deplaning. Relative risk of initial poor graft function (EAD + PNF) for Group 2 (CIT ≥ 9 h) was 2.3 (95%CI: 1.1–5.1).
Conclusion: Long-distance organ transportation is a compulsory measure, however, it allows to obtain acceptable results of liver transpalnts. Today, transportation distance of 3,500 km and 12 h CIT should be considered as limiting values. It is necessary to conduct a further study of the detailed CIT structure and the identification of the stages at which most of the delays occur. GPS-tracking preservation containers will be a useful tool.

PO178 OOCYTE DONATION PREGNANCIES IN KIDNEY TRANSPLANT RECIPIENTS

Pierluigi di Loreto[1], Domenico Montanaro[2], Chiara Branco[3], Antonella Impedovo[3], Carlo Rugiu[3]
[1]nephrology unit; [2]ospedale S. Maria della Misericordia; [3]magallini hospital

Sfondo: La donazione di ovociti permette alle donne con ridotta riserva ovarica, insufficienza ovarica prematura, disturbi genetici, menopausa chirurgica e ostruzione tubarica bilaterale di rimanere incinta.

La gravidanza dopo il trapianto di rene è diventata possibile grazie alla recente scoperta chirurgica e farmacologica
Metodi: Studio retrospettivo che include tutte le donne con trapianto renale e consegne dopo donazione di ovociti. Sono state analizzate le seguenti variabili: tipo di nefropatia, età del paziente in dialisi, età al trapianto, tempo tra dialisi e trapianto e tra trapianto e nascita del bambino, terapia immunosoppressiva, tipo di parto, peso del bambino, punteggio di Apgar, follow up della madre e del bambino , età dei donatori di ovociti, numero e qualità degli embrioni trasferiti. Solo donazioni di ovociti altruistici sono state permesse.
Risultati: Abbiamo seguito due gravidanze in due pazienti a cui era stata diagnosticata la nefropatia da IgA e nefropatia sconosciuta. Un paziente ha ricevuto un rene da donatore cadaverico, uno ha ricevuto un rene da donatore vivente. Sono stati trattati con antagonisti del calcio e alphametildopa per la loro pressione alta. Complicazione della madre: preeclampsia (1); Complicazioni fetali: sindrome respiratoria da distress acuto (1) nascite pretermine (due). Un bambino è stato

	All cases ($n = 71$)	Group 1: CIT < 9 h ($n = 41$, 58%)	Group 2: CIT > 9 h ($n = 30$, 42%)	p-value
CIT, h	8 (2–12)	7 (2–8.5)	10 (9–12)	< 0.0001
OTT, h	3.5 (0–8.8)	3.5 (0–7.3)	3.5 (1.5–8.8)	0.022
Distance, km	907 (0–3,498)	509 (0–3,445)	1,321 (75–3,498)	<0.001
In-hospital procurement, *n* (%)	4 (6)	4 (10)	0 (0)	-
Ground transportation, *n* (%)	20 (28%)	16 (39)	4 (13)	0.005
Passenger flight, *n* (%)	48 (66%)	21 (51)	27 (87)	0.005
Proportion of OTT in CIT, %	41 (0–92)	44 (0–85)	39 (17–92)	0.760
Donor Risk Index	1.58 (1.11–2.32)	1.58 (1.11–2.26)	1.64 (1.25–2.32)	0.317
Recipient Age, ye	46 (24–67)	47 (25–67)	44 (24–66)	0.676
MELD-Na, points	17 (8–37)	17 (8–35)	19 (8–37)	0.690
Urgent LT, *n* (%)	3 (4)	2 (5)	1 (3)	1.000
Prior LT, *n* (%)	10 (14)	7 (17)	3 (10)	0.499
EAD, *n* (%)	15 (21)	6 (15)	9 (29)	0.155
PNF, *n* (%)	4 (6)	1 (2)	3 (10)	0.308
Graft losses in 6 weeks, *n* (%)	11 (15)	4 (10)	7 (23)	0.189
6-mo recipient survival, % (95%- CI)	79% (68%–89%)	84% (73%–96%)	71% (46%–85%)	>0.05

ricoverato nell'unità di terapia intensiva neonatale. Il follow-up della madre non ha mostrato episodi di rigetto acuto. L'allattamento al seno è stato scoraggiato a causa della trasmissione di farmaci immunosoppressivi nel latte materno. Non abbiamo osservato una malattia significativa al follow-up dei bambini.
Conclusione: Il trapianto di rene e la donazione di ovociti sono di per sé fattori di rischio indipendenti per esiti avversi materni e fetali. I pazienti vengono quindi indirizzati a centri altamente specializzati dove gli ostetrici nefrologi intesivisti e neonatologi forniscono sorveglianza e trattamento

PO179 KIDNEY TRANSPLANT FROM DONORS AFTER CONTROLLED CIRCULATORY DEATH (DCD) COMPARED TO THE DONATION AFTER BRAIN DEATH WITH EXPANDED CRITERIA (ECD)

Mari Sargsyan, Emma Calatayud Aristoy, Eva Gavela Martinez, Asunción Sancho Calabuig, Julia Kanter Berga, Ana Ávila Bernabeu, Jose Francisco Crespo Albiach, Crespo Albiach, Luis Pallardó Mateu
H. Dr. Peset

Introduction: To date, there is a shortage of renal grafts in relation to the number of patients on the waiting list. ECD criteria donors (ECD) is currently an important source of kidneys in many centers, with a growing use of DCD donors in last years.
Objective: Analyse evolution of patients from DCD donors with a control group from ECD donors.
Methods: Retrospective cohort study of 40 DCD versus 40 ECD recipients. Demographic data, evolution of renal function, post-transplant complications and survival was described. We use SPSS statistics version 20.0. Groups were compared by Chi-squared or Mann-Whitney test for categorical or continuous data, respectively. Kaplan-Maier was performed to assess graft survival and patient survival.
Results: From November 2015 to January 2019, 40 patients with DCD grafts were transplanted, with a mean follow-up of 14.2 $\pm$ 10.7 months.

The donor age was lower in DCD group (57.2 $\pm$ 9.4 vs. 68.3 $\pm$ 9.3, $p < 0.001$), males were predominant in DCD group (62.5 % vs. 37.5%, $p = 0.02$). DCD group presented higher incidence of hypertension (52.5% vs. 72.5%, $p = 0.05$). We find no differences in the prevalence of DM (30% vs. 27.5%, $p = 0.5$) or serum creatinine (0.76 $\pm$ 0.27 vs. 0.83 $\pm$ 0.25 mg/dl, $p = 0.62$).

Regarding the characteristics of the recipients, we observe no differences in age (58.9 $\pm$ 0.5 vs. 63 $\pm$ 9.7 years, $p = 0.06$), gender distribution, modality of dialysis, etiology of CKD and blood group was observed. No differences in cold ischemia time (14.2 $\pm$ 7.6 vs. 16.6 $\pm$ 5.1 h, $p = 0.1$), in delay graft function ($p = 0.40$), or in the prevalence of acute rejection ($p = 0.1$). The evolution of renal function was similar during the follow-up ($p < 0.05$). We did not observe differences in graft survival ($p = 0.6$) or patient survival ($p = 0.6$) in one year follow up.
Conclusions: The use of kidneys from DCD donors, is a valid option for some patients in waiting list however the results are comparable with older ECD. Longer term follow-up will

PO181 PREDICTIVE FACTORS FOR GRAFTS FAILURE FOLLOWING KIDNEY-PANCREAS TRANSPLANTATION – RESULTS FROM AN 18-YEARS EXPERIENCED CENTER

Andreia Dias da Silva[1], Nicole Pestana[2], Filipa Silva[3], Sofia Pedroso[3], Manuela Almeida[3], Isabel Fonseca[3], Leonídio Dias[3], Jorge Malheiro[3], António Castro Henriques[3], La Salete Martins[3], António Cabrita[3]
[1]Centro Hospitalar Tondela-Viseu; [2]Hospital Dr. Nélio Mendonça; [3]Centro Hospitalar e Universitário do Porto

Simultaneous pancreas-kidney transplantation (SKPT) is the standard of care treatment for type 1 DM (T1DM) with end stage kidney disease. We searched for predictive factors (PF) for kidney (K) and pancreas (*p*) graft (G) failure (GF) and its impact on survival and K decline function.

We analysed 211 SKPT between 2000 and 2017. The least follow-up (FU) was 1 year (y). Immunosuppression included ATG+Tac+MMF+steroids. Survival analyses considered GF censored for death with functioning G.

The median (m) age was 35 (31–40) y and the m body mass index (BMI) was 22.1 Kg/m2. T1DM and dialysis duration was 24 $\pm$ 6y and 22 (0–143) months (except 10 pre-emptive). The mFU was 8.6 (4.9–11.8) y. There were 20 deaths (mainly infections and cardiovascular events). Survival rates at 1, 5, 10, 15y: 97%, 96%, 91%, 83% for patient; 96%, 93%, 84%, 79% for K; 88%, 82%, 76%, 74% for *p*. Post-operative complications occurred in 55 patients (26%); 19 had early GF (both:2; K:2; *p*:15).We analyzed a 182 patients' subcohort (excluding these 19 plus 10 with incomplete data): 13% had acute rejection (AR); 12.8% had DGF. At 1y FU, mGFR was 66 (54.3–78) ml/min/1.73 m2. GF occurred in 10% of K ($n = 18$) and 14% of *p* ($n = 25$). Independent PF of GF for *p*: de novo DSA (dDSA+) (HR 2.83, $p = 0.013$), AR (HR 3.09, $p = 0.020$), BMI < 22 Kg/m2 (HR 2.46, $p = 0.039$); and for K: dDSA+ (HR 5.53, $p < 0.001$), AR (HR 5.04, $p = 0.002$), younger age (per 1-y increase; HR 0.89, $p = 0.011$). The annual GFR decline was 2.06 ml/min/y; dDSA+ ($p = 0.003$), female gender (<0.001) and younger age ($p = 0.010$) were risk factors. Independent PF of death were K GF (HR 1.61, $p = 0.002$), *p* GF (HR 1.24, $p = 0.030$), older age (per 1-y increase; HR 1.28, $p = 0.013$), BMI < 22 Kg/m2 (HR 1.43, $p = 0.003$).

We obtained excellent G and patient survival rates. Early GF for *p* remains a significant cause of survival attrition. AR and dDSA+ were PF of GF for both G, emphasizing the relevance of alloimmune injury in the outcomes. Optimized nutritional status before SPKT may improve the outcomes.

PO182 DETRIMENTAL EFFECT OF DE NOVO DONOR-SPECIFIC ANTIBODIES (DDSA+) ON GRAFTS SURVIVAL IS ASSOCIATED BUT NOT DEPENDENT ON ACUTE REJECTION (AR) OCCURRENCE IN SIMULTANEOUS PANCREAS-KIDNEY TRANSPLANTATION (SKPT)

Filipa Silva[1], Nicole Pestana[2], Andreia Silva[3], Sofia Pedroso[1], Manuela Almeida[1], Isabel Fonseca[1], Leonídeo Dias[1], Jorge Malheiro[1], António Castro Henriques[1], La Salete Martins[1], António Cabrita[1]
[1]Centro Hospitalar e Universitário do Porto; [2]Hospital Dr. Nélio Mendonça; [3]Hospital São Teotónio

Post-transplant emergence of dDSA+ is associated with increased rejection and lower transplant survival. SKPT with high human leukocyte antigens (HLA) mismatching and non-adherence are known risk factors (RF). Our aim was to study dDSA emergence and impact in SPKT.

We analyzed 211 SKPT performed between May/2000 and Dec/2017. We excluded 29 patients due to pancreas (*p*) and/or kidney (K) graft failure (GF) within the first 15 days after surgery, leaving 182 patients as the study cohort. dDSA antigenic targets were identified at HLA 6 loci. Immunosuppression included ATG+Tac+MMF+Steroids. Patients were followed-up (FU) from transplant until death, GF or 31/Dec/2018.

dDSA were detected in 17%($n = 31$) during a mean FU of 8.6 (5.3–11.9) years (y), with a median time until dDSA detection 2.9y; 23%($n = 7$) had dDSA class I, 58%($n = 18$) class II and 19%($n = 6$) both. AR was more frequent in dDSA+ patients (13% vs. 6% dDSA- for *p*, $p = 0.172$; and 19% dDSA+ vs. 6% dDSA- for K graft, $p = 0.014$). At 15y FU, both K and *p* graft survival was worse in dDSA+ patients (respectively, dDSA-:86% vs. dDSA+:65%; dDSA-:91% vs. dDSA+:51%). Considering both dDSA and rejection status, 15y survival was 87% (–/–), 67%(–/+), 72%(+/–), 25%(+/+) ($p < 0.001$) for *p*, and 94%(–/–), 40%(–/+), 49%(+/–), 50%(+/+) ($p < 0.001$) for K graft. The annual GFR decline was 2.06 ml/min/y. dDSA ($p = 0.003$), female gender (<0.001) and younger age ($p = 0.010$) were RF for a steeper decline in annual GFR. Class II dDSA was significantly associated with a steeper GFR decline ($p = 0.001$). In a multivariable Cox model, dDSA and AR were independent predictors of both, *p* (respectively, HR 2.83, $p = 0.013$; HR 3.09, $p = 0.020$) and K GF (respectively, HR 5.53, $p < 0.001$; HR 5.040, $p = 0.002$). Mortality was higher in dDSA+($n = 4.13\%$ vs. dDSA- $n = 6.4\%$) SPKT ($p = 0.069$).

Our results confirm a strong association between dDSA+ and K and *p* GF in SPKT both in association with and independently from AR. Both detrimental events signal the importance of allo-immune response in SPTK.

PO183 INCREASE VOLUNTEER BY CONTINUOUSLY PROMOTING AWARENESS RAISING ACTIVITIES OF ORGAN TRANSPLANTS

Masae Ikeda[1], Noriko Arakawa[2], Daisuke Ishii[1], Fumino Noguchi[2], Tomoko Yoshida[2], Yusuke Sakata[1], Yuki Imura[2], Masatsugu Iwamura[1], Kazunari Yoshida[1]
[1]KITASATO UNIVERCITY; [2]KITASATO UNIVERCITY HOSPITAL

Background: : Since Japan received a major earthquake in 2011 and a disaster of the tsunami, volunteers in disaster increased. However, there are few volunteers to organ transplantation spread enlightenment activity. Members of the urology department have participated in the citizen festival hosted by hospital administrations and civic public seminars sponsored by the department for the past 20 years. Both festivals and seminars are projects throughout the year that have been supported by volunteers from the beginning.
Purpose: There is enjoyment of communication in organ transplantation enlightenment activities in volunteers.
Method: At the citizen festival, we will conduct exhibits and questionnaires on transplant medical care and organ donation. I will do a parade to appeal the importance of the presence or absence of intention to provide organs. At the citizen seminar, we had an educational lecture, had the experiences of patients and families, and talked about the experiences of transplant recipients.
Results: Both educational activities are held continuously, and it has been done by cooperation of hospital staff, medical students, patient society and media. The first volunteers were few, but now the number of people doubled. This became a circle of cooperation of many kinds of occupation.
Discussion: Approximately 420,000 people will participate in the citizen festival, which is a joint project with the government. It is important that many people of all ages become interested in transplant medicine. By providing opportunities for more people to participate, it will help to educate and secure future volunteer staff. Recognition and understanding of transplantation

information has led to an increase in the number of volunteers. A major point of ongoing activities is that "**knowledge and understanding**" brings enjoyment to the whole organization. Collaboration with volunteers will "enjoy enlightenment activities".

PO184 A CASE OF ERCP POST LIVER TRANSPLANT IN A PATIENT WITH NORMAL MRCP – THE LONG SHOT?

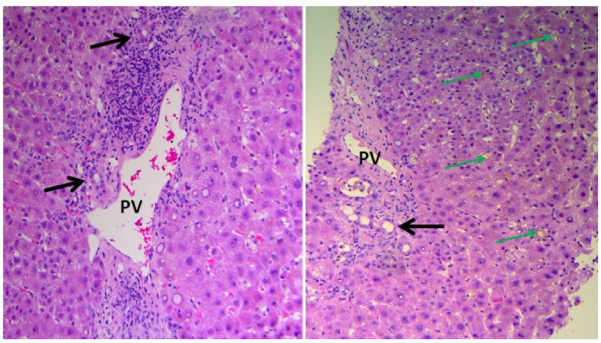
Ravikiran Sindhuvalada Karnam, Adeyi Oyedele, Lilly Leslie, Nazia Selzner, Mamatha Bhat, Zita Galvin
University of Toronto

Thirty-two year old sales executive had liver transplantation for cryptogenic liver cirrhosis. He received a Neurologic Determination of Death (*NDD*), CMV mismatched liver from a 73 year old male. The surgery was uncomplicated and he had a duct to duct anastomosis with hepatic artery reconstruction.

On the 8th post-operative day he was pulsed with Solumedrol for suspected rejection. Even after Solumedrol, the biopsy showed rejection with a rejection activity index (RAI) of 6–7 out of 9, for which he received thymoglobulin for 5 days. The porto-systemic pressure gradient was 13–22 mmHg. The follow up liver biopsies showed significantly improved rejection but there were diffuse senescence appearance to the small bile ducts with neutrophils in portal tracts and in capillaries as well as cholestasis but histologic features of obstruction were absent. Staining for C4d and CMV were negative on both biopsies. Donor specific antibodies were negative. However, there was persistent hyperbilirubinemia (normal hemoglobin). MRI/MRCP showed satisfactory appearances of the postoperative biliary tree and vessels. Post transplantation his INR was normal and he never had encephalopathy which essentially rule out primary graft dysfunction. In this context, his case was discussed at the multidisciplinary listing meeting and the consensus was to relist the patient for liver transplantation. However, given the severity of the hyperbilirubinemia, it was also discussed to try ERCP and visualize bile duct.

ERCP was performed almost 4 weeks post liver transplant. There was an anastomotic stricture with proximal dilation. Sphincterotomy and plastic biliary stent was placed across the stricture. He went into ERCP with serum bilirubin of 474 μmol / L, AST 40 U / L, ALT 49 U / L and ALP of 199 U / L.

Post ERCP the bilirubin and alkaline phosphatase have reduced gradually and his graft function is normalized.



PO185 DISSEMINATED HISTOPLASMOSIS POST LIVER TRANSPLANTATION MASQUERADING AS GRAFT REJECTION

Ravikiran Sindhuvalada Karnam, Danielle Adebayo, Adeyi Oyedele, Lilly Leslie, Nazia Selzner, Zita Galvin, Rotstein Coleman, Mamatha Bhat
University of Toronto

A 63-year-old gentleman underwent CMV mismatch deceased donor liver transplantation for multifocal hepatocellular carcinoma in the context of well-compensated Hepatitis C- cirrhosis. His medical history was significant for diabetes and stable CKD. The patient had an uncomplicated post-transplant course, being discharged from hospital after 10 days on Tacrolimus, MMF and tapering steroids. He had been tapered off of steroids and MMF by around 3 months post-transplant, when he presented to ER with increasing ascites, worsening renal dysfunction, fatigue, malaise, and functional deterioration over a 2-week period. Ultrasound with Doppler's revealed no concerns with the vessels or the biliary tree. Given the dramatic rise in his liver enzymes (Bili 50 μmol/L, AST279 and ALT 252U/L), he was pulsed with steroids prior to a biopsy being feasible. There was initially an improvement in his liver enzymes. However, by day 3 of admission, when he was scheduled to undergo a liver biopsy, he developed spiking fevers, worsening renal dysfunction and severe neutropenia. Broad-spectrum antibiotics were commenced, but the patient went into multi-organ dysfunction and required intubation due to acute deterioration. Liver biopsy suggested severe acute cellular rejection (RAI 8/9), along with evidence of parasites compatible with histoplasmosis. Investigations also demonstrated histoplasmosis in the blood and ascitic fluid. Antibiotic coverage then expanded to Amphoterecin B for histoplasmosis. Multi organ dysfunction improved, with normalization of liver tests and neutrophil count. Patient became dialysis-dependent, required lengthy rehabilitation, and has continued on Itraconazole at 8 months post-histoplasmosis admission. The donor never had histoplasmosis, but the patient did live in a trailer park, which could increase his exposure to Histoplasma. Histoplasmosis is a rare infectious complication that can masquerade as acute cellular rejection in the transplant recipient.

PO187 HIGH-LEVEL DONOR SPECIFIC ANTIBODIES ARE ASSOCIATED WITH THE RISK OF EARLY ANTIBODY-MEDIATED REJECTION AFTER KIDNEY TRANSPLANTATION BUT NOT WITH REJECTION TREATMENT RESPONSES

Jouni Lauronen[1], Marko Lempinen[2], Juha Peräsaari[1], Leena Martola[2], Mikko Haapio[2], Ilkka Helantera[2]
[1]Finnish Red Cross Blood Service; [2]Helsinki University Hospital

Background: Pretransplant donor-specific HLA-antibodies (DSA) are associated with an increased risk of antibody-mediated rejection (ABMR). However, characteristics of this and the risk factors associated with poor treatment responses are inadequately described. We analyzed the outcome of deceased donor kidney transplantation (Tx) with pretransplant DSA.
Materials/methods: Consecutive deceased donor kidney transplantations in our institution between October 2013 and October 2018 were analyzed. Treatment of ABMR was in most cases pulse steroids, IvIG, and rituximab combined with either a course of plasma exchanges (PE) or staphylococcal protein A immunoadsorptions (IA), based on the dialysis facility availability at the time of initiation of rejection treatment.
Results: Pretransplant DSA was detected in 138/1,152 patients. ABMR developed in 35/138 patients (25%) mean 25 days after Tx. Mean cumulative MFI (mean fluorescence intensity) in the DSAs detected was 19,369 (±15,733) among patients with ABMR, compared to 8,370 (±10,443) among patients with no rejection ($p < 0.001$), whereas dominant DSA MFI was 10,836 (±7,341) compared to 5,866 (±5,046) ($p = 0.001$), respectively. Among the patients with no preTx DSA, ABMR developed in only 14/1,014 (1.4%) patients. No association was seen with either higher cumulative MFI or dominant DSA MFI and poor response to ABMR treatment (creatinine > 200 μmol/l at one month after treatment, or creatinine > 200 μmol/l at one year or graft loss). Treatment with IA ($N = 15$) was associated with better treatment response ($p = 0.006$), and better graft function one month after the treatment and at one year (creatinine 169 vs. 264, and 144 vs. 234 μmol/l, respectively, $p = 0.04$ and 0.03), compared to PE ($N = 12$).
Conclusions: The MFI level of DSA was associated with the risk of early ABMR after kidney Tx. The level of DSA was not, however, associated with treatment response after ABMR. Treatment of ABMR with IA was associated better graft function compared to PE.

PO188 REPORT ON ANNUAL RESULTS OF DIP IN KOREA

Lee Hwajung, Kim Kyoungmin, Sohn Yu-Kyoung, Ju Yongho, Heo Sujin, Kang Hyunjin, Cho Wonhyun
Korea Organ Donation Agency

Background: The Donation Improvement Program (DIP) of KODA has been done to increase organ donation at each hospital.The program has been designed to evaluate and educate the medical staffs of each hospital about all steps of donation.We already reported Medical Record Review (MRR) and Hospital Attitude Survey (HAS) of DIP improved the ability of detecting potential donor and diagnosing the brain death. The purpose of this study is to examine the DIP results for 7 years.
Methods: For MRR, we analyzed 54,562 cases of medical records of mortality from 77 hosipitals between 2012 and 2018. The rate of identification of potential brain death and actual donation were reviewed retrospectively.

The degree of education experience, competence and knowledge related to brain death and donation have been analyzed from HAS data. Responders of HAS were 964 medical staffs and 964 medical staffs from 15 DIP hospitals in 2012 and 2018.
Result : MRR reviewed the identification rate of potential brain death were 25.1%, 41.1%, 68.1%, 73.5%, 68.2% respectively, 6 months before agreement, 6 months after agreement and 2 years and 3 years interval after agreement, 4 years and 5 years interval after agreement, 6 years and 7 years interval after agreement.And donation rate of each period were 7.6%,9.8%, 17.5%, 16.0%, 14.0%respectively.The medical staffs who had the necessary competence or necessary knowledge to explain a potential donor was 32.8% in 2012, while it increased up to 38.8% in 2018. Those who had the necessary competence or necessary knowledge to refer a potential donor increased markedly from 69.0% to 81.7%.Also, Those who answered 'have education experience about brain death' increased markedly from 36.8% to 49.0%.
Conclusion: DIP had a positive effect on the identification and donation rate of brain deaths as the confidence of brain death increased through education

for medical staff. However, as a result of DIP activities for 6 years, the identification and donation rate did not increa

PO189 CELL-FREE DNA AFTER PEDIATRIC HEART TRANSPLANTATION: A NATIONAL SWEDISH STUDY

Jens Böhmer[1], Håkan Wåhlander[1], Katarina Hanseus[2], Julia Asp[1], Anders Ståhlberg[3], Carina Wasslavik[1], Jan Sunnegårdh[1], Anne Ricksten[1], Göran Dellgren[1]

[1]Sahlgrenska University Hospital; [2]Skåne University Hospital; [3]University of Gothenburg

Background: Heart transplantation (HTx) comes with a higher risk for rejection compared with other solid organs. Graft surveillance largely depends on scheduled endomyocardial biopsies (EMB) as the gold standard due to the lack of reliable biomarkers. Donor-derived cell-free DNA (dd-cfDNA) has gained attention as a potential marker to assess organ function after HTx.
Methods: In a collaboration between the two pediatric heart centers performing heart transplantations in Sweden, a prospective cohort study was conducted between 2016 and 2018. Patients were followed with parallel measurements of dd-cfDNA and EMB during one year after HTx. 35 single-nucleotide polymorphisms (SNP) and, when applicable, a gene from the Y-chromosome were chosen to distinguish between recipient and donor. After a targeted preamplification-step, digital PCR was conducted.
Results: A total of 16 patients were eligible for inclusion, all chose to participate in the study. 1 patient died on the waiting list. 11 patients could be followed for one year after HTx, generating 95 EMB and 107 blood samples. dd-cfDNA levels were high on the first sample after HTx reflecting reperfusion injury, declining to very low levels (0.05% and lower) in stable patients. Dd-cfDNA showed good correlation to clinical events of the patients such as rejection, infection and post-transplant lympho-proliferative disease (PTLD). No episodes of false-low levels of dd-cfDNA were observed.
Conclusion: We constructed a technically robust method to measure cell-free DNA after HTx. Results are promising with respect to establishing a threshold for the exclusion of rejection requiring treatment (high negative predictive value). High levels of dd-cfDNA can, however, have multiple causes and cannot distinguish between various clinical events including rejection and infection.

PO190 ANTI-HLA ANTIBODIES AND DONOR SPECIFIC ANTIBODIES SIGNIFICANT DECREASE AFTER DARATUMUMAB TREATMENT

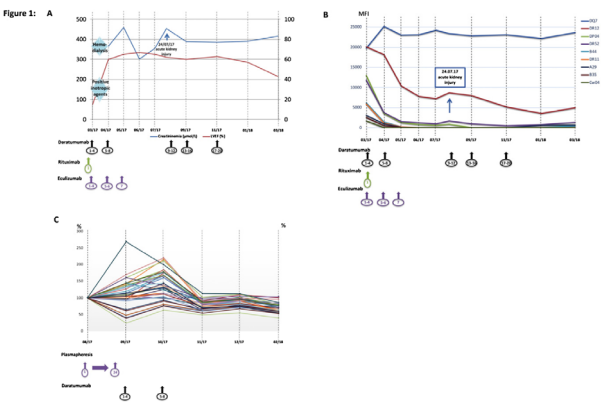
Marie Matignon[1], Soulef Guendouz[1], David Kheav[2], Chantal Gautreau[2], Karim Belhadj[3], Diane Bodez[3], Elsa Poullot[3], Laureline Faivre[3], Thibault Damy[3], Philippe Grimbert[3]

[1]APHP Hôpital Henri Mondor; [2]APHP Saint Louis; [3]APHP Henri Mondor

Anti-HLA antibodies donor specific or not are associated with low rates of eventual transplantation, increased risk of antibody-mediated rejection (AMR) and decreased allograft survival. Reducing the anti-HLA antibodies targeting plasma cells (PC) remains a clinical need in transplantation.

We treated two patients in the context of transplantation, after written consent, with daratumumab. Circulating anti HLA antibodies and DSAs were analyzed using high resolution Luminex assay technology (One Lambda).

The first patient presented with conventional therapy-resistant (plasmapheresis, rituximab and high dose intravenous immunoglobulin (IVIG)) heart and kidney AMR with PC predominant infiltration after complete immunosuppressive drug discontinuation. Nine DSAs were found with four class I *de novo* DSAs, four class II *de novo* DSAs, and one preexisting class II DSA. After eight weekly doses of daratumumab, clinical evolution was positive and anti-HLA antibodies MFI decreased dramatically. Intragraft and blood-circulating PCs were undetectable.



The second patient was a highly sensitized heart transplant candidate, refractory to conventional therapy (plasmapheresis, Rituximab and high dose IVIG). After treatment, cPRA was 98%. Clinical condition deteriorated and we used daratumumab as desensitization protocol. After eight weekly doses, a significant decrease of anti-HLA antibodies MFI was observed with cPRA = 62%, allowing heart transplantation, with only two DSA and two prohibited antigens before daratumumab therapy.

Our preliminary clinical results suggest that daratumumab could be a potential therapeutic strategy to increase allograft access in sensitized patients and limit DSA production in the setting of allotransplantation.

PO191 SEX-DEPENDENT CLINICAL OUTCOMES AFTER KIDNEY TRANSPLANTATION: A RETROSPECTIVE SINGLE-CENTRE ANALYSIS

Georgia Morgan[1], Zahrah Goolam-Mahomed[1], Suzy Gallier[2], Felicity Evison[2], Jay Nath[3], Adnan Sharif[3]

[1]University of Birmingham; [2]Department of Health Informatics, UHB; [3]Department of Nephrology and Transplantation, UHB

Introduction: Previous studies exploring sex-dependent outcomes after kidney transplantation have focused on sex differences in post-transplant graft function and/or graft survival. Very few studies have explored other clinically important outcomes such as difference in rates of re-hospitalisation or medical complications. Such information would alert transplant professions to the expected post-transplant course and allow more personalised counselling. The aim of this study was to analyse sex-stratified outcomes after kidney transplantation in a single-centre cohort analysis.
Methods: We compared demographic factors and clinical outcomes for all kidney-alone transplants performed at our centre between 2007 and 2018. Data was extracted from electronic patient records and Hospital Episode Statistics. Median time post-transplant was 5.3 years (IQR 2.7–8.7 years).
Results: Data were available for 1,737 transplants. Of these, 1,044 (60.1%) recipients were male. There was no statistically significant difference between recipient sexes with regard to length of post-operative hospital admission, rates of delayed graft function, 1-year rejection or emergency re-admission within 90-days. Moreover, no difference in either patient ($p = 0.503$) or graft survival ($p = 0.495$) was observed. However, female recipients had a trend towards lower creatinine values up to 5-years post-transplantation. Furthermore, although there no difference in risk for admission due to a cardiology or cancer indication, males were more likely to be admitted with a cerebrovascular indication (3.8% versus 2.0% respectively, $p = 0.034$) and females more likely to be admitted with an infection indication (23.7% vs. 18.3% respectively, $p = 0.007$).
Discussion: Our analysis is reassuring regarding equivalent survival outcomes for men and women and provides contemporary sex-specific outcome data to facilitate more targeted counselling prior to kidney transplantation.

PO192 A RARE CASE OF TYPE 1 PRIMARY HYPEROXALURIA IN A PEDIATRIC RECEPIENT UNDERGOING COMBINED ORGAN TRANSPLANT•

Nidhin Eldo

Aster medcity

Primary hyperoxaluria is an autosomal recessive disorder of glyoxylate metabolism. The prevalence of primary hyperoxaluria is 1–2 per million population, usually diagnosed in the late stages.

Deficiency of hepatic peroxisamal enzyme causes reduced transamination of glyoxylate to glycine and increased production of oxalate, leading to supersaturation of urine with oxalate forming nephrocalcinosis, renal tubular damage and ultimately renal failure. These calcium deposits also causes cardiomyopathy, heart block and other cardiac conduction defects, vascular disease, retinopathy, synovitis, oxalate osteopathy and anemia that is noted to be resistant to treatment.

Transplant in a pediatric child is cumbersome and a combined liver and kidney becomes challenging.

The potential for disaster is high. The complexity of the surgical procedure coupled with the fragile and tenuous condition of this patient created a ''anesthetic nightmare.''

We would like to present the challenges we faced in a combined liver and kidney transplant in a 3 year old 7 kilogram child making it the first in India to undergo a multiorgan transplant from live donors.

PO193 POSTOPERATIVE MANAGEMENT RATHER THAN PREOPERATIVE SELECTION MAY BE MORE HELPFUL IN PREVENTING HARMFUL DRINKING AFTER LIVER TRANSPLANTATION FOR ALCOHOLIC LIVER DISEASE

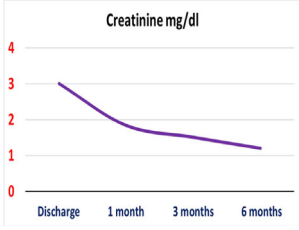
Yang Won Nah, Jin A. Kwon
Ulsan University Hospital

Introduction: In Korea, since the adoption of MELD-based allocation system in June 2016, much more liver grafts from deceased donors have been allocated to alcoholic patients. It's because alcoholic hepatitis patients whose MELD score were very high outnumbered the deceased donor. There are concerns about recidivism and especially harmful drinking in these patients. We studied rates and timing of alcohol relapse including harmful drinking and preoperative factors that could predict the alcohol relapse.
Methods: Alcohol relapse and harmful drinking were investigated among 42 patients who underwent liver transplantation for alcoholic liver disease at UUH. Follow periods were from 3 to 85 months. Alcohol relapse was diagnosed by interviewing the patients. Time to alcohol relapse after LT was recorded. Preoperative factors including 6 month sobriety, history of major psychiatric disease, history of drug addiction, marital state and type of transplantation (living donor or deceased donor) were analysed in relation to alcohol relapse.
Results: Alcohol relapse occurred in 10 (25%) patients including harmful drinking in 4 (10%). Any preoperative factors including 6 month sobriety could not predict alcohol relapse or relapse into harmful drinking. There was no patient with history of drug addiction. Alcohol relapse rates were not different significantly between LDLT and DDLT groups. All the relapses into harmful drinking occurred within 3 months after LT. One patient who was getting into harmful drinking 2 months after LT stopped drinking for the next 6 months until now by aggressive education that let him know himself in trouble by drinking.
Conclusion: Pre-transplant prediction of alcohol relapse is barely feasible in patients with alcoholic liver disease. Aggressive monitoring and managing alcohol relapse in the very early postoperative period may be more helpful in preventing the patient go into harmful drinking.

PO194 COULD WE IMPROVE THE RESULTS OF THE DONATION AFTER CARDIAC DEATH TRANSPLANTATION PROGRAM IN OUR HOSPITAL? A CHALLENGING START IN OUR CENTER

Guadalupe Tabernero Fernandez, Anika Tsyzkiewicz, Miguel Sanchez-Jauregui, Pilar Fraile Gomez, Tamara Garcia Garrido, Jesus Martin Centellas, Alejandro Rodriguez Campon, Sebastian Tamayo Arroyo, Karen Rivero Garcia, Josepa Sebastia Morant, Alberto Martin Arribas
Hospital Universitario de Salamanca

Introduction: Spain is the world leader in Kidney Transplantation, however we still have many people on the waiting list. Donation after cardiac death (DCD) has become a new source of good donors for patients.
Methods: Between 17/08/2017 and 15/01/2019 we have made 14 DCD transplantations in our hospital. 13 of the 14 were made by ultra fast surgery and only one donor had ECMO. We have prepared a descriptive study of our beginning.
Results: Average donor age was 64 ± 13. 6 (42.8%) were dead cause a brain traumatism, 6 (42.8%) because of a stroke, and 2 (14.4%) because of a respiratory insufficiency. Average age of recipients was 58 ± 7. All of donors went under a biopsy and score was done by Seron et al*. All the recipients were first transplant, induction was made with thymoglobulin and delayed start of tacrolimus. Warm ischemia time (WIT) mean was 8 min 46 s ± 5 min, and cold ischemia time (CIT) mean was 17 h 44 min ± 10 h 17 min. Mismatch average was 1.4. The incidence of delayed graft function (DGF) (considered as the need of dialysis in the first week) was 8 out of 13 patients (61%) and there were two rejections, one antibody mediated (ABMR) and one that was not proven by biopsy and was treated with intravenous steroids. Mean renal function at discharge was 3.1 mg/dl, at 1 month 1.8 mg/dl, and at 3 months 1.5 mg/dl.
Conclusions: even with the lack of a large number of patients, in the beginning of the program and watching the results of renal function, we could say that DCD is a good source of donors, achieving similar results to donation after brain death. In any case we need to improve the CIT to avoid high rate of DGF, and see the impact to the rejection.
* Seron et al. Nefrología 2008; 28 (4), 385–396



Results	MEAN	STANDARD DEVIATION
SCORE BIOPSY	2,38	
Warm ischemia time (min, sec)	8,46	(+/-)5
Cold ischemia time (h, min)	17,4	(+/-)10
Missmatch	1,04	
Delayed Graft Function	61,04%	
Acute Rejection	15,38%	

PO195 GUILLAIN-BARRE SYNDROME DURING INFLUENZA ATTACK IN RENAL TRANSPLANT RECIPIENT

Tuba Yanik Yalcin[1], Aydincan Akdur[2], Hande Arslan[1], Mehmet Haberal[2]
[1]Infectious Diseases, Baskent University; [2]Transplantation, Baskent University

Introduction: Influenza is one of the ten threats to global health in 2019 according to the WHO. Flu causes a higher rate of morbidity and mortality particularly in immunosuppressive patients.
Case presentation: A 53-year-old male, who underwent renal transplantation 5 years ago presented with fever, urinary incontinence, nausea and vomiting for 58 days. On physical examination, fever was 37.8 C and blood pressure was 150/90 mmHg. On admission he had extensive rales in the respiratory examination and metabolic acidosis. He was intubated for 1 day in ICU. Piperacillin-tazobactam, levofloxacin and oseltamivir combination therapy was administered. He had no flu vaccination. Although rapid antigen tests for Influenza A and B were negative, Influenza B and RSV positivity was detected by multiplex PCR. On the 4th day of his hospitalization he complained of lower extremity weakness. The electromyography analysis was consistent with sensorimotor polyneuropathy, F wave's alteration which supported Guillain-Barre syndrome (GBS). The patient was started on plasmapheresis treatment. On the 5th day of plasmapheresis treatment, dyspnea developed and the patient was taken to the ICU again. Piperacillin-tazobactam and levofloxacin treatments were discontinued and meropenem and linezolid treatments were started.

On the 17th day of his hospitalization, he was operated on for development of spontaneous bowel perforation due to hypoperfusion-associated mesenteric vascular event. Multidrug-resistant *Klebsiella pneumoniae* were isolated from the abdominal fluid samples and from the tracheal aspirate specimen of the patient. Despite the appropriate antibiotic therapy the patient died on the 32nd day of his hospitalization.
Conclusion: In this case, influenza associated Guillain-Barre syndrome is remarkable. This complication should be kept in mind with patients who are presenting with lower extremity neurological symptoms like weakness or pins and needles during or after influenza.

PO196 UTILISATION OF HYPOTHERMIC MACHINE PERFUSION (HMP) FOLLOWING STATIC COLD STORAGE FOR THE PRESERVATION OF DONATION AFTER BRAINSTEM DEATH (DBD) KIDNEYS: A UK POPULATION-BASED COHORT STUDY

Kamlesh Patel[1], Jay Nath[1], Thomas Smith[2], Ohema Powell[2], James Hodson[1], Nicholas Inston[1], Andrew Ready[1]
[1]University Hospital Birmingham; [2]University of Birmingham

Introduction: To date, no studies have described the utilization and potential clinical benefits of HMP for DBD kidneys after a period of SCS.
Methods : Using the National Health Service Blood and Transplant database, the authors compared outcomes for recipients of single- organ donation DBD kidneys preserved with HMP with those preserved using only static cold storage (SCS) between January 2007 and December 2015.
Results: Of 6,773 DBD donor renal transplants, 6,721 (99.2%) underwent preservation using static cold storage alone with less than one percent undergoing hypothermic machine perfusion ($n = 52$, 0.8%).

The rates of DGF were not found to differ significantly between the groups, with this occurring in 22.8% of SCS organs, compared to 28.3% of those preserved with HMP ($p = 0.380$). Neither patient nor graft survival were found to differ significantly between the groups, with hazard ratios for HMP vs. SCS of 1.73 (95% CI: 0.89–3.33, $p = 0.100$) and 0.81 (95% CI: 0.36–1.80, $p = 0.601$) respectively. Creatinine levels at follow up were also similar in the SCS and HMP groups.

	N	SCS	HMP	*p*-value
DGF	6,166	1,398/6,120 (22.8%)	13/46 (28.3%)	0.380
Graft Survival (5 Years)	6,768	85.6%	87.3%	0.601
Patient Survival (5 Years)	5,551	88.1%	81.3%	0.100
Creatinine (12 Months)	5,834	130 (104 ? 167)	140 (115 ? 179)	0.166
Creatinine (36 Months)	4,018	131 (104 ? 172)	129 (104 ? 164)	0.912
Creatinine (60 Months)	2,527	130 (103 ? 170)	150 (112 ? 202)	0.301

Conclusion: This study highlights a low application of HMP for preservation of DBD kidneys in the UK, contrasting with a previous study showing a higher rate of HMP usage for DCD kidneys. Low usage may represent a smaller perceived benefit given the lower incidence of DGF in this group compared with DCD kidneys.

PO197 NANOPARTICLE RELEASE BY EXTENDED CRITERIA DONOR KIDNEYS DURING NORMOTHERMIC MACHINE PERFUSION

Wouter Woud, Ana Merino, Martin Hoogduijn, Karin Boer, Martijn van den Hoogen, Carla Baan, Robert Minnee
Erasmus MC

Background: Extended criteria donor (ECD) organs suffer from more injury due to more severe ischemia/reperfusion injuries and other donor morbidities compared to standard criteria donors. Therefore, new methods of organ preservation and assessment are needed. Machine perfusion (MP) has extensively been studied and allows for the *ex vivo* examination of kidneys through analysis of perfusion fluids. We postulate that analysis of kidney derived nanoparticles, including Extracellular Vesicles (EVs), in perfusion fluid during normothermic MP may allow for the assessment of kidney quality prior to transplantation.
Methods/Materials: ECD kidneys were perfused at 37 °C for 2 h during which perfusate samples were taken at 30 min intervals. Samples were centrifuged at 16.000 g for 10 min to discard platelets, diluted 10x in 0.22 μm filtered PBS and analysed by Nanoparticle Tracking Analysis (NTA) to determine nanoparticle size and concentration.
Results: Perfusates from three ECD kidneys (2 donors after cardiac death, 1 donor after brain death, comparable warm ischemia times of 15 min followed by 12 h of cold ischemia, age 66/73/65, all male) were analysed. Although two size populations (120 & 170 nm) were observed in the perfusate after 2 h of perfusion, the average particle size was found to remain unchanged (~155 ± 7.6 nm) during the entire perfusion procedure. An ~7.75-fold increase in cumulative nanoparticle concentration was observed over time: $9.03E^9$ particles/ml after 2 h compared to $1.17E^9$ particles/ml after 0 min of perfusion. Particle excretion increased in a linear manner.
Conclusion: These results indicate that analysis of perfusion fluid by NTA may be utilized to assess renal quality prior to transplantation. The released nanoparticles are likely to contain kidney-derived EVs which may be indicative for renal quality. Nevertheless, whether this release of nanoparticles reflects kidney function requires further research.

PO198 BREAST CANCER AFTER KIDNEY TRANSPLANTATION: SINGLE CASE REPORT

Igor Nikolov[1], Irena Rambabova-Busletic[1], Lada Trajceska[1], Igor Dzikovski[2], Dusanka Nikolova[2], Nino Vasev[3], Goce Spasovski[3]
[1]University Clinic of Nephrology; [2]University Clinic for Thoracic and Vascular Surgery; [3]University Clinic of Radiotherapy and Oncology, Skopje, Macedonia

Improvement of immunosupression in transplanted patients have resulted in long life expectancy and a higher incidence of carcinomas in these patients than the general population. We present a 43 year old, nonsmoking white female patient who had transplanted kidney from living donor in 2009, with non complicated posttransplant course. Her immunosupressive regimen was successful for all long the years with triple combination of prednisone, cyclosporine and mycophenolate. Eight years after kidney transplantation the patient developed secondary anemia and chronic allograph nephropathy with mild increase of serum creatinine and proteinuria 0.19 g/L. We have noticed prolactinemia increase of 3.69 mmol/L. Genetic analysis of mammal biopsy was performed and a variation of c.3140A>G, pHis1047Arg in PIK3CA gene was detected. After performing bilateral total mamectomy with impalnt put in place, we obtained a diagonsos of adenoid cystic carcinoma. Immunosuppressive tretament was adapted and calcineurin inhibitor was replaced by mTOR inhibitor (Everolimus). We implemented also an citostatic course treatment by pembrolizumab. The serum kidney parameters were preserved and graft function was protected. Six months later the patient developed ovarian cyst and a cyst adenoma was put as a diagnosis.

Our case reinforces the need for early detection of possible carcionoid changes and use of mTor inhibitors and chemoprevention in these patients may also be a consideration for selected transplanted patients.

PO199 OUTCOMES AFTER DELISTING FOR TRANSPLANTATION

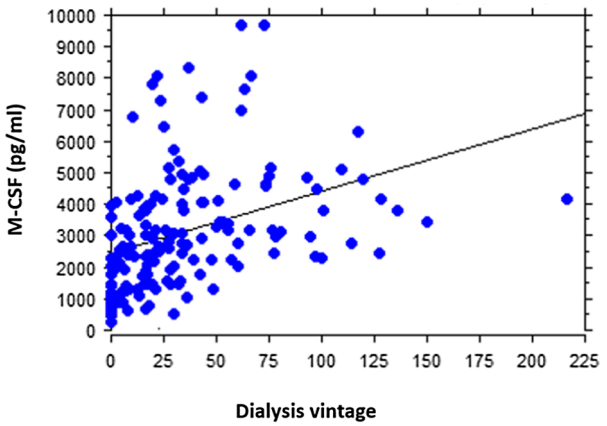
Kiran Sran, Anthony Dorling, Olivia Shaw, Nicos Kessaris, David Game, Nizam Mamode
Guy's and St Thomas' NHS Foundation Trust

Background: HLA sensitisation has a significant impact on waiting time for a deceased donor (DD) kidney transplant in the UK (median 2,218 days in patients with CRF > 85% vs. 1,063 days in CRF < 9%), with highly sensitised patients receiving few/no organ offers due to unacceptable antigens. The removal of certain antigens from this list (delisting) may increase the likelihood of receiving an offer and proceeding to transplantation. Chances of a successful match in living donor (LD) sharing schemes may also be improved.
Methods: Highly-sensitised patients active on the waiting list were assessed via a test plasma exchange (PEX) with the aim of identifying low-level antibodies that could be reduced during 1 session of PEX pre-transplantation so as to achieve a negative crossmatch. Based on the potential reduction, patients were delisted either in DD or LD sharing schemes.
Results: Via this approach, we have performed 11 (5 LD, 6 DD) transplants on delisted patients between 2014 and 2018. 4 patients were successfully matched in the UK Living Kidney Sharing Scheme, of which 3 required 1 PEX pre-transplantation. 1 patient delisted on the DD scheme received a transplant from an unspecified LD, requiring 1 PEX pre-transplantation. Within the group of 6 DD (4 DBD, 2 DCD) transplants on delisted patients, 2 patients received compatible offers (not on the basis of delisting) and did not require PEX pre-transplant. 4 patients were offered organs based on delisting; 2 of these were transplanted across a positive crossmatch following 1 PEX, and both suffered multi-organ failure.
Conclusions: Our experience suggests that this can be an effective strategy for successful transplantation in highly sensitised recipients, particularly in the context of a LD sharing scheme. However outcomes in deceased donation are uncertain. Factors potentially contributing to this include: prolonged dialysis prior to transplantation (>10 years), peri-operative haemodynamic instability and calcific vascular disease.

PO200 PRE-TRANSPLANT MACROPHAGE COLONY STIMULATING FACTOR (M-CSF) IS NOT ASSOCIATED WITH DELAYED GRAFT FUNCTION AFTER KIDNEY TRANSPLANTATION

Roser Guiteras[1], Anna Manonelles[2], Anna Sola[1], Gonzalo Villanueva[1], Josep Mª Cruzado[2]
[1]IDIBELL; [2]Hospital Universitari de Bellvitge

Background: Macrophage colony stimulating factor (M-CSF) is the principal growth factor for monocyte and macrophage differentiation and survival. Patients with chronic renal failure have increased M-CSF levels so this factor could contribute to aggravate ischemia-reperfusion injury after kidney transplantation (KT). However, the association between pre-transplant M-CSF and delayed graft function (DGF) has not been previously investigated.
Methods: This is a single center retrospective study. From May 2016 to December 2017 we identified 158 KT with pre-transplant serum available. M-CSF levels were measured by enzyme-linked immunosorbent assay (ELISA). Among them, 128 patients received a KT from a deceased donor and 30 from a living donor. Five healthy volunteers were considered as controls. The outcome variable was DGF and the multivariate analysis was adjusted by relevant variables associated with DGF.
Results: Pre-transplant M-CSF serum levels, donor age, cold ischemia time, dialysis vintage and type of KT were associated with DGF in the univariate analysis. By logistic regression analysis in a model including donor age, dialysis vintage, M-CSF and type of KT, the variables associated with DGF were donor type (living vs. deceased, RR 0.61, 95%CI 0.007–0.506) and dialysis vintage (RR 1.012; 95% CI 1.001–1.023). Interestingly, there is a correlation between dialysis vintage and baseline M-CSF (Figure, $p < 0.0001$)
Conclusion: M-CSF serum levels before KT depend on dialysis vintage and are not associated with DGF.



PO202 RETHINKING THE TIME INTERVAL TO EMBRYO TRANSFER AFTER UTERUS TRANSPLANTATION

Liza Johannesson, Giuliano Testa, Anji Wall
Baylor University Medical Center

Background: Uterus transplant aims to restore fertility and provide recipients the opportunity to carry their own pregnancy. Due to the novelty of the procedure, there is uncertainty regarding the timing of embryo transfer after transplant.
Methods/Materials: We have reviewed the factors to be considered prior to embryo transfer, including functional recovery, evidence of graft function, immunosuppressive medications, risk of ACR and risk of infection in relation to the worldwide oputcome of uterus trasnplantation. The fundamentals of uterus transplantation being a temporary transplant, aimig for pregnancy in healthy young recipients.
Results: We recommend patient-centered criteria to determine this timing, based on postoperative recovery, evidence of graft function, immunosuppression regimen, and infectious disease susceptibility. The incentive of minimizing the total recipient graft time and concomitant exposure to immunosuppressive agents in this young, healthy patient population strongly supports shortening the transplant-to-embryo transfer time.
Conclusion: Uterus transplant aims to restore fertility and provide recipients the opportunity to carry their own pregnancy or pregnancies. Our experience, the experience of other uterus transplant programs, and results of successful pregnancies in other solid organ transplant recipients (mainly kidney) suggest that embryotransfer (ET) could be considered as soon as 3 months after uterus transplantation if all of the above criteria are met. Given the unique characteristics of uterus transplantation and the recipient population, the transplant-to-ET interval should differ from recommendations in other organ and vascular allograft transplantations. The incentive of minimizing the recipient-graft-time and concomitant exposure to immunosuppressive agents in this young, healthy patient population strongly supports shortening the transplant-to-ET time.

PO203 A NEW ASPECT TO BE CONSIDERED IN BEHAVIOURAL DISORDERS FOLLOWING LIVER TRANSPLANTATION

Ruben Sanchez-Aldehuelo[1], Verónica Ubieto Capella[2], Irene García De La Filia Molina[1], Pedro López Hervás[1], Javier Graus Morales[1], Miguel García González[1], Agustin Albillos[1]
[1]Hospital Universitario Ramón y Cajal; [2]Hospital de Navarra

Introduction: Behavioural disorders (BD) are frequent during early post-transplantation period, usually related to tacrolimus neurotoxicity. We report a different cause of BD, not described in the literature, due to drug transmission during liver transplantation (LT). **CASE Report:** A 60-year-old woman, with alcoholic cirrhosis (Child-Pugh C10; MELD score 15) received a LT. She fulfilled 7 years alcohol abstinence and denied any other toxic consumption. Donor was an 18-year-old male who died following a cranioencephalic trauma. Donor urine toxics were positive for cannabis, cocaine, methamphetamine and opioids. No incidents were recorded during surgery neither on first day post-LT. However, on day + 2 she presented a slurred speech although was orientated and no abnormalities were found in the neurological examination. On day + 3, symptoms worsened, and the patient showed apathy and mutism. Nevertheless, Tacrolimus and Mycophenolate were started. Due to frank symptomatology worsening on day + 4, with visual hallucinations computed tomography was requested with no findings. Given the unusual evolution of the BD, having started prior to tacrolimus and taking into account the donor's history, toxic determination in urine sample was requested on day + 4. Clinical symptoms were self-limited and improved during the next 24 h , so Tacrolimus was maintained with no recurrence of the BD.
Discussion: CNI are responsible for a myriad of adverse effects during early post-LT period. BD are really striking and often represent a reason to modify immunosuppressive agents. Differential diagnosis with other causes of BD must be made, being essential the knowledge of events chronology. In this case, CNI have not started yet, so positive result for Cannabis in urine determination would explain it. No other cases of toxic transmission from donor to recipient during LT have been reported so far. Therefore we consider that this entity must be considered when BD appear in early post-LT period

PO205 INTERFERON-GAMMA INCREASES THE PROTEIN EXPRESSION OF THE IMMUNOMODULATORY MARKER HLA-E IN HUMAN AMNIOTIC EPITHELIAL CELLS IN VITRO

Fanny Lebreton, Kevin Bellofatto, Charles-Henri Wassmer, Lisa Perez, Vanessa Lavallard, Géraldine Parnaud, Estelle Brioudes, David Cottet-Dumoulin, Domenico Bosco, Thierry Berney, Ekaterine Berishvili
Geneva University Hospitals and University of Geneva

Background: Human amniotic epithelial cells (hAECs) gained great interest in regenerative medicine due to their safety, regenerative and immunomodulatory properties. He hypothesize that using these cells in combination with islets could improve islet engraftment and survival after transplantation. Although hAECs express HLA-G and HLA-E involved in immunomodulation, the expression of these antigens varies from donor to donor and is decreasing during culture. It has been shown that inflammatory cytokines can induce production of MHC class 1 molecules. In this study, we tested weather interferon-gamma (IFN-g) could amplify expression of HLA-G and HLA-E in hAEC.
Methods: Primary hAEC were incubated in conventional medium or medium containing 10, 25, 50, 100, 200, 500, 1,000 and 2,000 IU/ml human recombinant IFN-γ for 24–48 h and assessed by flow cytometry for CD105, CD90, CD326, SSEA-4, HLA-G and HLA-E.
Results: While HLA-E was weakly expressed in hAEC cultured in conventional medium (6.5%), IFN-γ exposure induced a massive increase of HLA-E expression (>90%, 7.6–13.4 fold increase) in all groups. HLA-G expression was also upregulated in a time-dependent manner (fold increase: 1.1–2.1 after 24 h vs. 1.7–3.5 after 48 h), but not in a dose-dependent manner. CD105 (1.3–3.5 fold increase) and SSEA-4 (1.1 fold increase) expression were also upregulated after IFN-γ exposure, while CD90 expression was slightly decreased (0.9 fold increase).
Conclusion : Our data show that IFN-γ upregulates HLA-E expression in hAECs even at low doses (10 U/ml). Our approach can be successfully used for activation of immunomodulatory properties of hAECs.

PO206 COMPARING THE SCANDIATRANSPLANT KIDNEY ALLOCATION SYSTEM WITH A COLOR PRIORITY KIDNEY ALLOCATION SYSTEM

Bruno Lima[1], Helena Alves[2]
[1]Oficina de Bioestatistica; [2]Instituto Nacional de Saúde, Dr Ricardo Jorge

Background: The excellent outcomes of kidney transplantation and the increased incidence of renal disease have increased the demand for this renal replacement treatment. The distribution of such scarce resource as deceased donors' kidneys for transplantation must be done striking a balance between utilitarian values and fairness. Worldwide we can find several kidney allocation systems (KAS) for transplantation. Previously, we proposed a color priority (CP) KAS, which prioritize patients in the waiting list for a kidney transplant from a deceased donor. Prioritization is done according to sensitization level and time on dialysis, within each color priority we select those with less HLA mismatches. In this study, we aimed to compare Scandiatransplant KAS with our CP KAS.
Methods/Materials: We generated data for a simulated waiting list of 500 recipients and 70 cadaveric donors and applied both Scandiatransplant-KAS (SKAS) and CPKAS to obtain two groups of selected recipients for each system. Mann-Whitney Test was used to compare ages, time on dialysis and donor-receptor age differences and Chi-square test was used to compare cPRA and HLA mismatches frequencies by allocation system. p values < 0.05 were considered statistically significant. All the analysis was performed in R Studio, an environment for R programming language.
Results: We did not found statistical differences between ages of selected patients from both KAS. Patients selected through CPKAS have higher median time on dialysis (67 months vs. 48.5 months) and lower median age donor-recipient difference age (9 years vs. 13 years) when compared to those patients selected through SKAS. On the other hand, recipients selected by SKAS have lower number of HLA mismatches with their donors than those recipients selected by CPKAS.
Conclusion: Scandiatransplant KAS prioritize patients with lower number of HLA mismatches giving less importance to patient time on dialysis and donor-recipients age differences.

PO207 COMPLICATIONS AND QUALITY OF LIFE AFTER DECEASED DONOR RENAL TRANSPLANTATION: A SINGLE CENTRE STUDY

Ayah Mekhaimar, Hannah Maple, Rhana Zakri, Kyung Chan Park, Kiki Cruse, Nizam Mamode, Nicos Kessaris
King's College London/Guy's and St Thomas' Hospital

Background:
Renal transplantation has been reported to significantly improve quality of life (QoL) for patients with end-stage renal failure. The impact of post-operative

complications on QoL is much less known. This study aimed to determine whether QoL is adversely affected by post-operative complications.
Methods: Data were collected on all patients receiving a kidney transplant in our unit between 2012 and 2013. Patient demographics, donor & recipient characteristics and 12-month post-operative complications, specifically surgical & urological, were collected. Questionnaires were sent within 12 months of transplantation to assess life satisfaction, distress, mood & health-related QoL (HRQoL).
Results: Data were collected for 188 patients. QoL questionnaires were completed by 81. The average age was 52 years, 127 (67.6%) were male, and 102 (54.3%) had a transplant from a DBD donor. 161 (85.6%) recipients experienced at least one post-operative complication; the most commonly reported being Clavien Dindo (CD) grade II (29.3%). There was no significant difference in QoL outcomes between those who had complications and those that did not (Life satisfaction 21 vs. 23 $p = 0.548$, Distress 13 vs. 9 $p = 0.156$, Mood 1.4 vs. 1.8 $p = 0.515$, HRQoL 39 vs. 39, $p = 0.825$). However, those with severe complications (CD $\geq$ IVa) were found to have significantly higher levels of distress than those with less severe complications (16.8 vs. 11 respectively; $p = 0.007$). Perhaps surprisingly, graft rejection and similarly graft loss did not appear to have a negative impact on QoL.
Conclusion: Broadly speaking, QoL outcomes do not appear to be adversely affected by post-operative complications after renal transplantation, and likewise for rejection and graft loss. However, higher levels of distress have been found in those with severe complications. These findings imply that QoL outcomes do not necessarily correlate to physical outcomes.

PO208 OCCUPATIONAL REHABILITATION FOLLOWING KIDNEY TRANSPLANTATION - MULTICENTRE, INTERNATIONAL STUDY COMPARING SELECTED EU COUNTRIES AND 20-YEARS FOLLOW-UP IN POLAND

Elzbieta Wlodarczyk[1], Zbigniew Wlodarczyk[1], Ondrey Viklicky[2], Klemens Budde[3], Marie Kolarova[2], Leon Bergfeld[3], Leszek Paczek[4], Maciej Glyda[5]
[1]Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Torun; [2]Institute for Clinical and Experimental Medicine, Prague; [3]Charité Universitätsmedizin Berlin, Berlin Charit; [4]Warszawski Uniwersytet Medyczny; [5]Department of Transplantation, Poznan District Hospital

Background: Returning to work and participation in social life are now objective parameters that demonstrate the effectiveness of transplantation. The study was design to identify factors determining the effectiveness of occupational rehabilitation of kidney recipients and occupational exclusion in selected European Union countries.
Material/Methods: Study was constructed as cross-sectional, multicentre and international, involving 300 kidney recipients in 3 centres in Poland, and 100 recipients both in Czech and Germany. In addition, data of the Polish population allowed for a comparison with similar study carried out in 1998 - after 20 years of economic and political transformations. Validated SF - 36 quality of life questionnaire assessing the quality of life after kidney transplantation, as well as an authorial, validated questionnaire constructed for this study were used. The SF-36 questionnaire allowed for self-assessment of health and quality of life.
Results: In total, 52 variables were analyzed. Patients in Germany more often than in Poland and the Czech Republic were professionally idle after kidney transplantation. However, despite their passive professional attitude, their quality of life in all aspects was higher than in Poland and the Czech Republic. Patients with higher education and those professionally active in the pre-transplant period were more likely to return to work. With regard to the Polish population: in the last 20 years, the percentage of Polish patients who have taken up or continued their professional work after the kidney transplantation has almost doubled.
Conclusions: Variables that increase the risk of occupational exclusion are: young and advanced age, female gender, lack of education, place of residence in rural areas, long period of illness and lack of occupational activity before transplantation. The information obtained gives the opportunity to improve vocational rehabilitation system and support those at risk of professional exclusion.

PO211 PROCUREMENT BIOPSY TO EVALUATE MARGINAL KIDNEY DONORS IN A LARGE PORTUGUESE COHORT

Sofia Cerqueira[1], Sofia Cerqueira[2], Natalia Silva[2], Rui Castro[2], Catarina Romaozinho[2], Teresa Morgado[2], Arnaldo Figueiredo[3], Ciria Sousa[2], Pereira Pedro[2]
[1]Vila Real Hospital; [2]CHTMAD; [3]CHUC

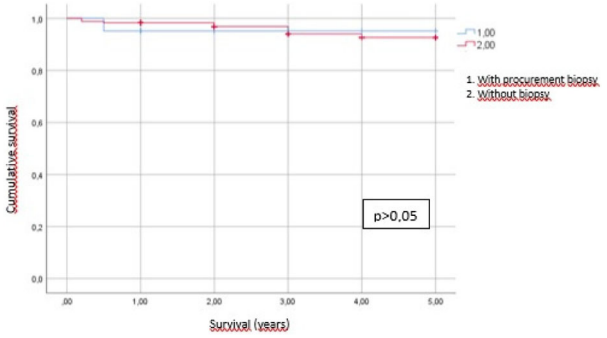
The KDPI incorporates 10 variables to evaluate expected graft survival. Procurement biopsies are often performed in cases of marginal kidney donors, especially when they have more comorbidities. We aimed to determine if graft survival was worse for marginal kidneys when they were retrieved after biopsy versus when they were not biopsied.

Retrospective study analyzing kidney transplants that were performed in one center between January 1st, 2013 and June 31st, 2018. We calculated KDPI for all donors and gathered those kidney grafts which were accepted for transplant (either with or without a biopsy) and had a KDPI $\geq$ 75% ($n = 149$). Log rank test was used to determine if survival was significantly different for kidneys which were selected after a procurement biopsy. Fisher's exact test was performed to determine association with graft failure. Remuzzi score was calculated from biopsy reports and a bivariate correlation was performed to determine association with KDPI.

Total offer for donation was 1,255 kidneys. Mean kidney donor age was 59 years ($\pm$16). There were no donors after cardiac death. Median [IQR] KDPI was 79 [1,100] %.

109 kidney biopsies were performed. Discard rate was 64%. 22% of kidneys accepted for transplant had KDPI $\geq$ 75%. Graft survival at 5 years was 93% and it wasn't different for kidneys from marginal donors which were biopsied and those which were not (log rank test with a $p > 0.05$). Eleven graft failures were recorded during our follow up. These were also not related with a kidney graft being accepted with or without biopsy (Fisher's exact test, $p > 0.05$). There was no association between KDPI and Remmuzi score (Pearson correlation with $p > 0.05$).

Kidneys from marginal donors retrieved after a procurement biopsy did not show a different survival from kidneys which were selected without a biopsy. We could imply from our study that procurement biopsies allow for the selection of kidney grafts with a good survival, that would otherwise be discarded.



PO213 DV200 AS AN ALTERNATIVE TOOL FOR MEASURING RNA INTEGRITY IN PROBLEMATIC SAMPLES: ISOLATION OF RNA FROM URINE FOR TRANSCRIPTOME ANALYSIS IN RENAL TRANSPLANTATION

Carlos Carmona, Marlon Castrillón, Cristian Álvarez
Universidad de Antioquia

Background: Transcriptome analysis has become an important research target in renal transplantation. Nevertheless further information regarding its role in allograft outcomes and its utility as diagnostic tool is required. In 2001 Suthanthiran et al reported an increase in messenger RNA for perforin and granzime B in urine of acute renal allograft rejection patients. Despite its importance as noninvasive sample urine is still challenging for RNA isolation due to abundant RNases and pH conditions. Although it has been implemented in quantitative PCR its usage in RNA Sequencing has been limited due to the required but unreached RNA conditions.

Most of the platforms implemented in RNA Seq require high integrity measured with RNA Integrity Number (RIN). This must be at least 7 in a scale from 0 to 10. RIN above 7 have not been reported in urine. For overtaking this, quality control is also based on DV200 which must be above 30%.
Methods/Materials: Urine and peripheral blood were obtained from one tolerant patient. Urine was centrifuged for 30 min. Sediment was treated with 1 ml of Tri Reagent. 16x106 leucocytes were treated with buffer EL for red blood cells lysis. 1 ml of Tri reagent was added. RNA isolation was performed according to manufacturer instructions.
Results: RNA concentration was 134 ng/ μL in urine and 42.1 ng/ μL in blood. RIN was lower in urine than in blood. Nevertheless DV200 values were 86.05% and 50.61% for blood and urine respectively. Average size of fragments after copy DNA libraries preparation were 324 bp and 334 pb for blood and urine respectively.
Conclusion: RNA isolated from urinary sediment implementing Tri Reagent is suitable for sequencing. Although RIN is considered the standard parameter for assessing RNA integrity alternative tools as DV200 and the implementation of different protocols for cDNA library preparation compatible with the platforms for sequencing might also be considered especially when working with problematic samples as urine.

PO214 LOW SPECIFIC GRAVITY OF FIRST MORNING URINE PREDICTS BKVN IN KIDNEY TRANSPLANT RECIPIENTS WITH BK VIRURIA

Gang Huang, Xuetao Cheng
The First Affiliated Hospital of Sun Yat-sen University

Objective: BK Polyomavirus nephropathy (BKVN) is an important cause of renal transplant dysfunction. The collecting duct and distal convoluted tubules, which is related to the concentration function of urine, are often the earliest sites of kidney involvement. This study assessed the combined use of specific gravity of first morning urine and BK viruria to predict BKVN.
Methods: We retrospectively enrolled kidney transplant recipients at our center from March 2015 to February 2018 including 24 patients (group A) with biopsy-proved BKVN, 22 patients (group B) with BK viruria but no BKVN, 18 patients (group C) with biopsy-proved T cell mediated rejection (TCMR) and 20 patients (group D) who had stable renal function and no BKV infection. Urine specific gravity was detected by dipstick testing at 0, 0.5, 1, 3, 6, 9, 12, 15, 18, and 24 months. ROC curve analysis was performed to analyze the predictive value of urine specific gravity for BKVN in patients with BK viruria.
Results: At diagnosis, specific gravity of first morning urine of group A (1.009 ± 0.003) was significantly lower than that of group B (1.019 ± 0.004, $p < 0.001$), group C (1.011 ± 0.00, $p = 0.003$) and group D (1.014 ± 0.006, $p = 0.001$) respectively. In BKVN patients, after switching from tacrolimus to low-dose cyclosporine A, the decreasing trend of urinary viral loads and blood viral loads was consistent with the increasing trend of specific gravity of first morning urine, reaching statistical difference at 3 months after treatment (1.011 ± 0.003, $p = 0.002$) compared with those at diagnosis (figure 1). The ROC curve analysis for BKVN by combining urine specific gravity and BK viruria (≥5,000 copies/ml) reveals that the optimal cut-off is 1.009 to detect BKVN, with high sensitivity (66.7%), specificity (86.4%), and area under the ROC curve (0.844).
Conclusion: Combination of specific gravity and urinary BK viral loads is an useful measurement for predicting BKVN.

PO219 KNOWLEDGE AND ATTITUDE TOWARDS KIDNEY TRANSPLANTATION AMONG FILIPINO DIALYSIS NURSES

Marilyn Vinluan-Olveda[1], Benita Padilla[1], Concesa Casasola[1], Marichel Pile-Coronel[1], Ma Macapaga Elizabeth[2], Jaymie De Vera[3]
[1]National Kidney and Transplant Institute; [2]Ateneo de Manila University;
[3]Human Organ Preservation Effort, National Kidney and Transplant Institute

Background: Despite the established benefits of kidney transplantation (KT) among suitable End-Stage Renal Disease (ESRD) patients, the transplantation rate in the Philippines remains low. Multiple factors, both involving donor and recipient issues, contribute to the country's low transplantation rate. One modifiable factor may be lack of adequate transplant education among ESRD patients. Through their proximity and frequent interaction with patients and family members, hemodialysis (HD) and peritoneal dialysis (PD) nurses may be expected to contribute to the provision of transplant education among ESRD patients. It is essential that dialysis nurses possess sufficient knowledge and positive attitude towards KT. This study aims to determine the knowledge and attitude of Filipino dialysis nurses towardsKT.
Methods: This is a cross-sectional study conducted among 391 dialysis nurses who attended the 2018 Annual Postgraduate Course on Dialysis held at National Kidney and Transplant Institute, Philippines. Nurses were asked to complete a researcher-generated and validated questionnaire.
Results: Survey response rate was 66%. The mean age was 32 years. Most of the respondents were female (69%) and HD nurses (92%). Dialysis nurses from National Capital Region comprised 22.7% of the respondents. Majority (83%) had positive attitude towards KT and 72% were willing to discuss KT with their patients. Only 37% achieved a passing score on the knowledge section. Attitude level was significantly associated with knowledge level wherein positive attitude level was observed more among those with high knowledge level. A positive attitude level was also significantly associated with the willingness to discuss KT. Knowledge level had no significant association with willingness to discuss KT.
Conclusion: Filipino dialysis nurses have exhibited positive attitude towards KT. However, their level of knowledge was low. The need for educational intervention program cannot be overemphasized.

PO220 COMBINATION OF HIGH-DOSE INTRAVENOUS CYCLOSPORINE AND PLASMA EXCHANGE TREATMENT IS EFFECTIVE IN POST-TRANSPLANT RECURRENT FSGS = RESULTS OF CASE SERIES

Murathan Uyar, Mehmet Emin Demir, Ozgur Merhametsiz
Yeni Yuzyil University

Background: Idiopathic FSGS commonly recurs in the early posttransplant period. The treatment protocols and results are conflictive in recurrent FSGS. We aimed to present the results of our treatment protocol and basic approach to the disease recurrences.
Methods: We evaluated 40 patients with FSGS from registries of a single organ transplant center. 12 patient who fit completely the diagnosis of idiopathic FSGS by clinical, laboratory and biopsy findings were included. The study design did not aim to compare non-recurrent FSGS with treatment protocol due to a lack of genetic and familial evaluation. A treatment protocol consists of plasma exchange and high dose intravenous cyclosporine were performed independent of induction maintenance protocol.
Results: Two patients have lost graft due to early allograft rejections and one did not receive our protocol completely. 9 patients completed the overall planned treatment protocol and fully could be documented for evaluation. All patients achieved to complete or partial remission. In 12 months follow-up period 6 patients are surviving with a well-functioning kidney. Two lost their grafts due to acute rejections and one lost the allograft due to incompliance in further treatments.
Conclusion: Idiopathic FSGS is more common recurrent than thought to be. With early detection of proteinuria, administration of a plasma exchange-based treatment protocol can reverse proteinuria. We think our treatment protocol is a well established, efficient, and safe choice for posttransplant recurrent FSGS in adults.

PO221 MID-TERM RESULTS OF A DUAL KIDNEY TRANSPLANTATION FROM 90-YEARS OLD DONOR

Fabio Vistoli, Vittorio Grazio Perrone, Massimiliano Barsotti,
Gabriella Amorese, Sara Iacopi, Francesca Menonna, Niccolò Napoli,
Emanuele Kauffmann, Ugo Boggi
Pancreas and Kidney Transplantation Center - Pisa City and University Hospital - Pisa, Italy

Background: Organ shortage and aging donor population stimulate transplant centers to increase use of expanded criteria donors, in particular kidneys from older donors. There are not agreed criteria to define which kidneys are not suitable for transplant in reason of their age.
Patients: Donor was a 90-year-old female patient with a body mass index (BMI) of 21. The cause of death was spontaneous cerebral hemorrhage. Her medical history included hypertension. The donor was classified at light non-standard risk due to anti-HBcAb positive. Creatinine levels were 0.75 and 0.89 mg/dl. No proteinuria was detected. Macroscopically the kidneys presented multiple small parenchymal cysts and calcification of the ostium of the renal arteries. Cumulative Karpinsky score was 5 for both donor kidneys. Recipient was a 62-year-old female patient with 27 of BMI. She began peritoneal dyalisis on 2016. On January 10, 2018 a double kidney transplant was performed in the right iliac fossa. Cold ischemia time was 12 h ant 30 min.
Results: No delayed graft function after transplantation. Immunosuppressive protocol consisted of induction with basiliximab and steroids, maintenance regimen with low-dose steroids and mycophenolic acid from day 0, combined with delayed introduction of extended-release tacrolimus. Tacrolimus target serum levels were 8–12 ng/ml in the first month, and 8–6 ng/ml thereafter. The patient was discharged with a serum creatinine level of 1.9 mg/dl. One year after transplant, serum creatinine level was 1.4 mg/dl, no proteinuria, tacrolimus through level 7.8 ng/ml. No complication during first year follow-up.
Conclusion: From this case we can speculate that kidneys from donors very old can be used safely after a careful selection of the donors and immuno-suppresion tailored to. Further assessment tools may be represented by the use of machine perfusion that may be able to better discriminate the kidneys at greater risk of primary non-function

PO222 MACHINE-LEARNING, A POWERFUL APPROACH TO PREDICT OUTCOME IN LUNG TRANSPLANTATION: PRELIMINARY RESULTS

Julien Fessler[1], Cédric Gouy-Pailler[2], Antoine Roux[1], Edouard Sage[1],
Marc Fischler[1], Morgan Le Guen[1]
[1]Foch Lung Transplant Group; [2]Commissariat à l'Energie Atomique

Background: The extreme difficulty of carrying out randomized studies in lung transplantation leads us to consider statistical methods derived from artificial intelligence. Previous studies in kidney and liver transplantations, as well as in heart surgery, showed better predictive ability than traditional statistical analysis to predict postoperative outcomes.
Methods/Materials: We analyzed a prospective database of all 410 double lung transplantations performed in our center, from January 2012 to June 2018. We used a Gradient Boosting Trees approach over 284 variables, in order to predict one-year mortality. Performance of the predictive model is evaluated at successive temporal stages of the transplantation process. Variables are incrementally acquired during the process, starting with patient-only variables at stage 1, ending with patient, donor and surgery-related measurements at stage 12. At each stage of the process, a machine-learning model has been trained based on available variables. A 80–20-cross-validation procedure has been performed at each stage, and repeated 40 times, resulting in a set of 40

area under ROC curve scores, whose distribution has been summarized using boxplots (median, 25 and 75 percentiles).
Results: The AUROC performance starts at 0.65 for step 1 and reaches 0.75 (see figure 1 for empirical percentile estimates) at the final step. In thegradient boosted tree, major factors are ECMO duration, end surgery time and the estimated blood loss.
Conclusion: Machine-learning approach is feasible to predict one-year mortality after lung transplantation. This preliminary study is encouraging to go further in the analysis of our database.

PO223 EFFICACY OF LIVING DONOR LIVER TRANSPLANTATION FOR PATIENTS WITH METHYLMALONIC ACIDEMIA

Jae-Guk Jang, Yu-Bin Kim, Sung-Hee Lee, Seak Hee Oh, Beom-Hee Lee, Han-Wook Yoo, Jung-Man Namgoong, Dae-Yeon Kim, Kyung Mo Kim
Asan Medical Center, University of Ulsan College of Medicine

Background: Methylmalonic acidemia (MMA) is rare, autosomal recessive, multisystemic inborn errors of branched chain amino acid metabolism. MMA results in defective mitochondrial metabolism of coenzyme A (coA)-activated carboxylic acids. Despite medical and nutritional management, patients often suffer neurologic damage during catabolic stress, and develop end-stage renal disease requiring KT in adolescence. Early CDLT has emerged as an intervention aimed at preventing episodes of decompensation and improving metabolic control. If so, it is necessary to look at whether the transplantation of LDLT with, carrier-identified parent or sibling liver, in MMA patients.
Method: Four patients (M: F = 3: 1) underwent LT at mean age (6.8) years (range 1.4–13.7 years) and had a mean follow-up of 2.35y (range 1.1–4.0y). During this period, the MMA values of blood and urine were compared. We also compared the prevalence of metabolic crisis before and after liver transplantation.
Result: Four LTs were donated by living donors, three from carriers, and one from a sibling including done auxiliary LT. Actual survival was 100%. In all four cases, the MMA titer after transplantation showed a significant improvement. Metabolic crisis was not observed during follow up period after LDLT. In addition, no patient showed progression of severe renal impairment requiring dialysis until now. The delay of cognitive development is not progressing. All patients are provided with autonomic diet and social functioning with improved neuropsychiatric development based on outpatient treatment.
Conclusion: LDLT using a carrier donor can be a feasible option to prevent metabolic distress in MMA patients even with the auxiliary graft. Long-term outcome should be evaluated with focusing on neurodevelopmental growth and progression of systemic organs.

PO226 PRECISION PROTEOMICS AS PROTEIN BIOMARKER DISCOVERY IN DETECTING BRONCHIOLITIS OBLITERANS SYNDROME

Haider Ghaider[1], Mohammed Fakhro[2], Hillevi Larsson[3], Sandra Lindstedt[2]
[1]Lund University Hospital, Lund; [2]Department of Cardiothoracic Surgery, Lund University Hospital; [3]Lund University Hospital

Purpose: Chronic lung allograft dysfunction (CLAD) and especially bronchiolitis obliterans syndrome (BOS) remains the major barrier to long-term success after lung transplantation. A biomarker in blood that can diagnose BOS would be of great clinical value. In the current study we have conducted broad proteomics analyzes to detect biomarkers for BOS
Methods: Plasma from a cohort of 46 lung transplant recipients (BOS grade 0: 27 samples, BOS grade 1–3: 19 samples were collected. A panel of 639 proteins were analyzed using a high-component, multiplex immunoassay that enables analysis of protein biomarkers. This high multiplexing is achieved with Proximity Extension Assay (PEA) technology. Each biomarker is addressed by a matched pair of antibodies, coupled to unique, partially complementary oligonucleotides, and measured by quantitative real-time PCR.
Results: Regression analysis comparing 3 groups BOS grade 0, BOS grade 1, and BOS grade 2–3 showed significant differences in plasma proteins expression levels of 12 different proteins: Low affinity immunoglobulin epsilon Fc receptor (FCER2). Corticoliberin (CRH). Interleukin-20 receptor subunit alpha (IL-20RA). TNF-beta (TNFB). Immunoglobulin superfamily member 3 (IGSF3). Cathepsin L1 (CTSL1). Anterior gradient protein 2 homolog (AGR2). Matrix metalloproteinase-9 (MMP-9). Thymic stromal lymphopoietin (TSLP). Importin subunit alpha-5 (KPNA1). Signaling threshold-regulating transmembrane adapter 1 (SIT1). Ras GTPase-activating protein 1 (RASA1).
Conclusion: Interestingly a significant decrease was be observed in TNFB, KPNA1, IGSF3, CRH, FCER2 levels in recipients with BOS grade 1, but also in recipients with BOS grade 2–3. IL-20RA was significantly decreased in recipents with BOS grade 1, but not in recipients with BOS grade 2–3. Proteomic patterns may be a viable way in the search of early biomarkers for BOS

PO227 B CELL DERIVED EXOSOMES ARE ASSOCIATED WITH ANTIBODY MEDIATED REJECTION IN KIDNEY TRANSPLANT RECIPIENTS DESENSITIZED FOR A POSITIVE CROSS-MATCH

David Cucchiari[1], Valeria Tubita[2], Mari Ramirez-Bajo[2], Jordi Rovira[2], Francesc E. Borràs[3], Laura Carreras-Planella[3], Alexandre Hertig[4], Frederic Oppenheimer[1], Fritz Diekmann[1], Ignacio Revuelta[1]
[1]Hospital Clínic de Barcelona; [2]Institut d'Investigacions Biomèdiques August Pi i Sunyer [IDIBAPS]; [3]Institut d'Investigació en Ciències de la Salut Germans Trias i Pujol [IGTP]; [4]Hôpital Tenon

Introduction: Kidney transplant recipients undergoing desensitization for a positive cross-match are at very high risk of developing Antibody-Mediated Rejection (ABMR). Because of desensitization, peripheral circulating B cells and donor-specific antibodies are of little value as biomarkers. We hypothesized that B-cell derived exosomes may reveal the proliferation of tissue-resident B cells that would not be otherwise detectable in peripheral blood. This would constitute an earlier biomarker of ABMR in this very delicate cohort of patients.
Material and methods: we studied 11 cross-match positive patients desensitized with rituximab, plasma exchange and immunoglobulins (DS group). Control groups were cross-match negative patients, 10 hypersensitized (cPRA > 85%, HS group) and 9 with low immunological risk (cPRA < 10%, CT group). Enriched pools of exosomes were isolated through size-exclusion chromatography from stored serum samples and studied for CD19 and HLA-II expression as markers of B cells origin by beads-based flow cytometry. MFI values were normalized with the exosomal biomarker CD9. All groups were analyzed at three time points: T1) pre-transplant T2) first biopsy (either for rejection or for protocol) and T3) 1 year. In the DS group, another time point was before starting desensitization.
Results: In the DS group, CD19- and HLA-II-positive exosomes dropped after desensitization ($p < 0.01$) and were lower compared with the HS group at T1 ($p = 0.06$ for CD9) and at T2 ($p = 0.04$ for CD19 and $p = 0.03$ for HLA-II). Within the DS group patients who developed ABMR (7 patients at T2 and 5 patients at T3) had significantly higher expression of CD19- and HLA-II-positive exosomes compared to those who did not reject ($p = 0.03$ and $p = 0.02$ for CD19 at T2 and T3 and $p = 0.01$ and $p < 0.01$ for HLA-II at T2 and T3, respectively).
Conclusions: B-cell derived exosomes dropped significantly after desensitization in comparison with a paired-risk group. However, those patients who later deve

PO228 POST TRANSPLANT FLUID BALANCE IN KIDNEY TRANSPLANT RECIPIENTS: DO WE GET IT RIGHT?

Mohamed Morsy[1], Daniel George[2], Abbas Ghazanfar[2], Nicoletta Fossati[2]
[1]Leicester General Hospital, University Hospitals of Leicester; [2]St. George's University Hospitals NHS Foundation Trust

Background: There is wide variability between transplant centres in giving IV/oral fluids post kidney transplantation. Also, there is no evidence to support specific practice in terms of the amount of fluid. There is an acceptable level of evidence to support giving Hartmann's solution over normal saline. We submit our snap shot experience on our post-transplant fluid intake regimen.
Subject and methods: A prospectively collected data for 23 kidney transplant recipients was analysed. This included recipients' demographics, dialysis modalities, type of kidney donor, daily fluid intake, both intravenous and oral, and fluid output including urine output, drain output in addition to estimated 500 ml insensible losses. All recipients received Hartmann's solution as intravenous fluid replacement. Hourly IV fluid intake matched hourly urine output + 50 ml if hourly diuresis < 250 ml.
Results: Of 23 kidney transplant recipients, 13 (56.5%) were males and 10 (43.5%) were females. Out of the total cohort, 8 (34.7%) recipient were predialysis, 14 (61%) on haemodialysis and one (4.3) recipient was on peritoneal dialysis. The table below represents the fluid input and output pattern over the first 7 days.

Days post transplant	Total input (ml)	Total output (ml)	Fluid balance (ml)	Total input ml/kg/day	Total output ml/kg/day	Fluid balance ml/kg/day
Day 0	3,929.8	2,322.5	1,607.3	51.7 ± 27.5	30.6 ± 16.8	+21.1 ± 22.4
Day 1	6,387.5	3,676.4	2,711.1	84.0 ± 36.6	48.4 ± 28.1	+35.7 ± 19.3
Day 2	3,847.8	3,546.5	301.3	50.6 ± 18.4	46.7 ± 26.0	+4.0 ± 17.0
Day 3	2,195.1	2,909.0	−713.9	28.9 ± 14.7	38.3 ± 17.4	−9.4 ± 10.6
Day 4	1,353.7	2,167.8	−814.1	17.8 ± 15.2	28.5 ± 15.5	−10.7 ± 9.7
Day 5	1,317.2	2,521.9	−1,204.7	17.3 ± 12.5	33.2 ± 15.3	−15.9 ± 7.3
Day 6	1,415.0	2,094.0	−679.0	18.6 ± 10.3	27.6 ± 9.2	−8.9 ± 4.6
Day 7	682.5	1,905.3	−1,222.8	−16.1 ± 4.3	25.1 ± 7.2	−16.1 ± 3.2

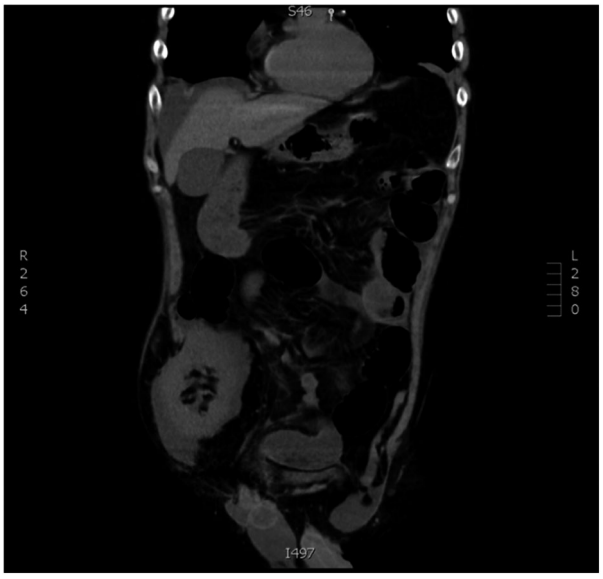
Conclusion: Kidney transplant recipients at our Institution received high IV and oral fluid volumes in the first 3 days post transplant, generating a positive fluid balance; this was followed by negative fluid balance when recipients were

purely on oral intake. A balance between IV and oral intake needs to be carefully monitored in early days post-transplant.

PO230 INCARCERATED ILEUM WITHIN AN INGUINAL HERNIA AFTER KIDNEY TRANSPLANTATION – A CASE REPORT

Shu-Yu Liu, Meng-Kun Tsai, Kuen-Yuan Chen
National Taiwan University Hospital

The patient was a 50-year-old man who had received kidney transplantation over right side abdomen in 2000 and laparoscopic peritoneal fenestration to drain the peri-graft kidney fluid in 2013. He also had a right side painless inguinal bulging mass for three years but never been treated. This time, he came to the emergent department suffering from abdominal fullness and dull pain with bilious vomiting for 4 days. A right inguinal hard bulging mass was also presented without pain or tenderness. The standing abdomen plain film revealed increased bowel gas with dilatation of bowel loops and air-fluid levels in the abdomen. Ileus was impressed. On a plain abdomen CT, a right inguinal hernia with small bowel incarceration was presented, which cause upstream small bowel dilatation and obstruction. An emergent operation was arranged. An incarcerated ileum over the level of 25 cm above from ileocecal valve was confirmed during the operation. The incarcerated ileum was reduced and a 4 cm ischemic necrotic small bowel was segmentally resected and followed by end-to-end anastomosis. The hernia defect was closed by approximating the adjacent fascia with simple suture. This case reported a rare condition of incarcerated inguinal hernia with small bowel obstruction after kidney transplantation.



PO231 STRATEGIES TO OVERCOME IMMUNOLOGICAL BARRIERS IN KIDNEY TRANSPLANTATION FROM LIVING DONOR: PAIRED DONATION VERSUS DESENSITIZATION

Fabio Vistoli, Vittorio Grazio Perrone, Lorenzo Gozzini, Alessandro Mazzoni, Emanuele Kauffmann, Niccolò Napoli, Sara Iacopi, Carlo Lombardo, Gabriella Amorese, Ugo Boggi
Pancreas and Kidney Transplantation Center – Pisa City and University Hospital – Pisa, Italy

Background: Living Donor Kidney Transplantation (LDKT) is the best option for end stage renal disease patients. Immunological barriers (AB0 incompatibility - AB0i - and donor specific HLA antibodies – DSA) represent the main hitch to LDKT. Desensitization therapies and Kidney Paired Donation (KPD) are the two main strategies to overcome these barriers and to spread LKDT.
Methods: We applied KPD since 2005 and desensitization protocols since 2009. We analyzed the outcomes in 54 LKDTx between 2005 and 2017: 21 KPD (10 AB0i, 8 DSA and 3 AB0i+DSA) versus 33 desensitization (10 AB0i, 18 DSA and 5 AB0i+DSA). Both groups received similar maintenance immunosuppression. We analyzed the results of the main groups: KPD versus desensitization and those of the subgroups, according to reasons for incompatibility: AB0i versus DSA. All the groups were comparable for recipient and donor demographics, for main pathological, and surgical characteristics, at baseline.
Results : Patient survival rates at 1 and 4 years after LKDT are 100% and 97% in desensitization and 100% and 95% in KPD groups; graft survival rates at 1 and 4 years after LKDT are 100% and 91% in the desensitization group and 100% and 100% in the KPD. No difference in clinical complications at longest follo-up were recorded in main groups and in AB0i versus DSA subgroups. LKDTx, DSA desensitized, recipients are more prone to produce denovo DSA and, when they are high titer (>3,000 mfi), recipients have higher risk of acute rejection (50% vs. 14%). Cost analysis highlights desensitization strategies require an additional cost equal to 3 months of dialysis.
Conclusion: We propose a decisional algorithm including and integrating both strategies in an unique flowchart that gives priority to KPD for couples with DSA. In case of AB0i, results of direct LKDTx after desensitization protocols or KPD are comparable, differing only for cost, reasonable, compared to dialysis prolongation needed while waiting for a compatible KPD over 3 months.

PO232 TIPS PLACEMENT AFTER ORTHOTOPIC LIVER TRANSPLANTATION (OLT): STILL BUILDING THE "NICHE". PRELIMINARY RESULTS OF A SINGLE CENTRE EXPERIENCE

Claudia Iegri, Giovanna Gaffuri, Giulia Magini, Roberto Agazzi, Domenico Pinelli, Michela Guizzetti, Stefano Fagiuoli
ASST Papa Giovanni XXIII

Background: Data on TIPS placement after OLT are still limited.Compared to the pre-OLT setting, several issues appear to be challenging:1.Technical feasibility might be compromised due to anatomical changes after transplant;2.Potentially enhanced neurological and renal toxicity under immunosoppression;3.Long term survival (OS) is still unclear and may be affected by the leading indication for TIPS.
Aim: Evaluate the outcome of TIPS procedures after OLT at out Centre.
Methods: Since 2002, 11 pts have undergone TIPS placement after OLT at our center.This population was prospectively followed until last clinical visit, reOLT or death.
Results: Population's clinical features summarized in Table 1.During f.u., all HCV (+ve) pts developed a recurrent HCV infection (4–36%) while, in the remaining, a vascular disorder occurred:SOS/VOD- 45%; PVT- 18%.Indications for TIPS were:Refractory ascites (RA)-45% and Clinically Significant Portal Hypertension (CSPH) without RA-55%.In the latter, time to TIPS was shorter-151.5 d[16–316]- than in the others-104 d[19.7–188.3]; log rank = 0.6.This data may reflect the trend to anticipate *p* -s shunt insertion before refractory ascites arise.All of the stents were covered with a median size of 8 mm.The procedure was technically feasible in 9 pts and only in 2 (18%) a second attempt was necessary.Onset of HE was an isolated event (1 pt-9%).None developed renal failure or worsening of pre-existing mild impairment.Four pts underwent re-OLT (CSHP-33%; RA-40%).The median OS (included re-OLT) was significantly worse in RA group (4.7y[1.2–8.3]) than in the others (14.2y[10.2–18.3]; log rank = 0.04; Fig.1).
Conclusion: Our study suggests a satisfactory technical feasibility of TIPS procedure after OLT.None developed renail failure.The rate of HE was very low.In pts with RA and without any perspective of re-OLT, indication for TIPS should be accurately weighted given the poorest outcome observed in this category.

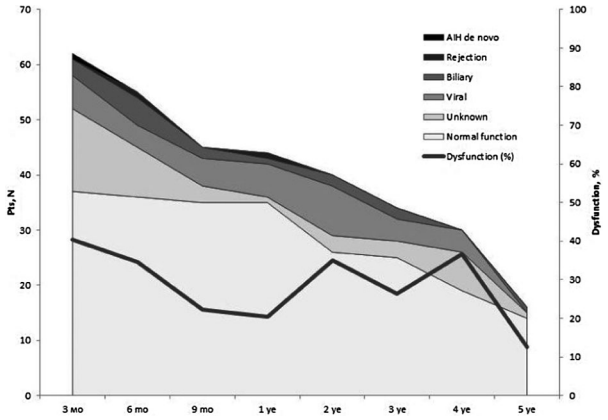
Baseline clinical characteristics of the population	
Male: n-%	9- 81%
Age: median [IC]	60 [48-64] y
Main blood group (A): n-%	6- 55%
Meld at OLT: median [IC]	20 [10-28]
Indication to OLT: (n-%)	
• ESLD	6- 55%
• HCC	5- 45%
Etiology of liver disease: n-%	
• HCV	4- 36%
• HBV	2- 18%
• Alcohol	3- 27%
• Others	2- 18%
Recurrence of primary liver disease: n-%	4- 36% (all HCV)
Vascular disorders: n-%	
• VOD/SOS	5- 45%
• PVT	2- 18%
Re-OLT: n-%	4- 36%

PO233 THE INCIDENCE AND AETIOLOGICAL STRUCTURE OF LATE LIVER ALLOGRAFT DYSFUNCTION

Yulia Malinovskaya, Ksenia Kokina, Alexey Sidorenko, Alexander Ammosov, Yan Moysyuk

Moscow Regional Research and Clinical Institute

In contrast to early dysfunction there is few data about incidence, causes and prognostic value of late liver allograft dysfunction (LAD).
Aim: to determine the frequency and structure of LAD.
Materials and methods: The data of 83 liver transplant recipients in follow-up was included. We defined LAD as: abnormal aminotransferase level (AST/ALT), GGT, alkaline phosphatase or bilirubin and/or hepatic synthetic dysfunction (low albumin or prothrombin) which fails to normalize or any symptoms of liver cirrhosis (esophageal varices, hepatic encephalopathy, ascites).
Results: We observed normal liver graft function in the majority of cases. LAD at 3 month posttransplant was diagnosed in 40% of cases, 6 month – 35%, 1 year – 20%, 2 year – 35%, 3 year – 26%, 4 year – 37%, 5 year – 13%. Aetiology of this complication on 3 month was unknown in 40%, 6 month – 47%, 1 year – 11%, 2 year – 21%, 3 year – 33%, 4 year – 64%, 5 year – 50%. The most common identified cause of LAD was viral infection: at 3 month-24%, 6 month – 16%, 1 year – 24%, 2 year – 36%, 3 year – 16%, 4 year – 16%, 5 year -no viral infections observed. Biliary complications, leading to LAD were determined in 12%, 16%, 4%, 8%, 8%, 0%, and 4 % on 3 month, 6 month, 1, 2, 3, 4, 5, year respectively. Other causes include rejection (2 cases), de novo or recurrence of autoimmune hepatitis (1 case). Also there were 6 patients in follow-up longer than 5 years (6–13 ye), one of them with graft cirrhosis due to unknown reason and another with biliary complications. Others had normal graft function. No patient deaths due to LAD were detected, but we had no ability to count survival rate, because liver transplantations were not consecutive.
Conclusion: In our center more than half of recipients who have been survived to particular term, have normal liver function. The highest frequency of late allograft dysfunction is observed in the first 6 month. Unfortunately there still a significant part of cases with unknown aetiology.



PO234 OUTCOMES OF LIVER TRANSPLANTATION FROM DONORS WITH BODY MASS BELOW 10 KILOGRAMS

Anna Roszkiewicz, Marek Stefanowicz, Hor Ismail, Marek Szymczak, Grzegorz Kowalewski, Przemysław Maruszewski, Piotr Kaliciński

The Children's Memorial Health Institute

Background: Liver transplantations (LT) from small donors weighing 10 kilograms (kg) or less are rather uncommon and considered as high risk due to the donor group. The aim of the study is to assess the outcomes of LT from small donors in authors' experience.
Methods/Materials: Between 1990–2018 in authors' department 757 patients received LT, including 21 who were transplanted with whole liver graft from donors with body mass (BM) less than 10 kg. Retrospective analysis included demographics of donors and recipients, donor characteristics, details of transplantation, early and late complications and long term outcomes.
Results: The donors' age was between 3 weeks and 27 months (median 10 months), BM ranged from 4 to 10 kg (median 8 kg). The recipients' BM ranged from 4 to 14.7 kg (median 8 kg). The most common indications for LT was biliary atresia in 10 patients, Alagille syndrome in 3, primary liver graft failure in 2. Two patients (10%) developed primary nonfunction and early poor graft function and required retransplantation (RT). Three children (14%) developed hepatic artery thrombosis, all were successfully revascularized. Portal vein thrombosis occurred in 1 patient (5%), who received RT. Three patients (14%) were reoperated due to early biliary leak, and 2 patients (10%) developed late biliary anastomosis stricture, 1 of them underwent RT (32 months after LT). Graft survival was 86% at 1 year and 62% at 5 years. Five patients died (14 days, 8, 43, 55 months after LT and 3 days after RT). Overall survival is 76%. Post transplant follow up ranges from 14 days to 20 years (median 129 months). Survivors (16) live with normal graft function (3 with second graft).
Conclusion: LT in small recipients with the grafts from similar size donors is a challenging procedure with a significant rate of complications and RT, but considering the lack of adequate size organs for the youngest recipients long term results are acceptable.

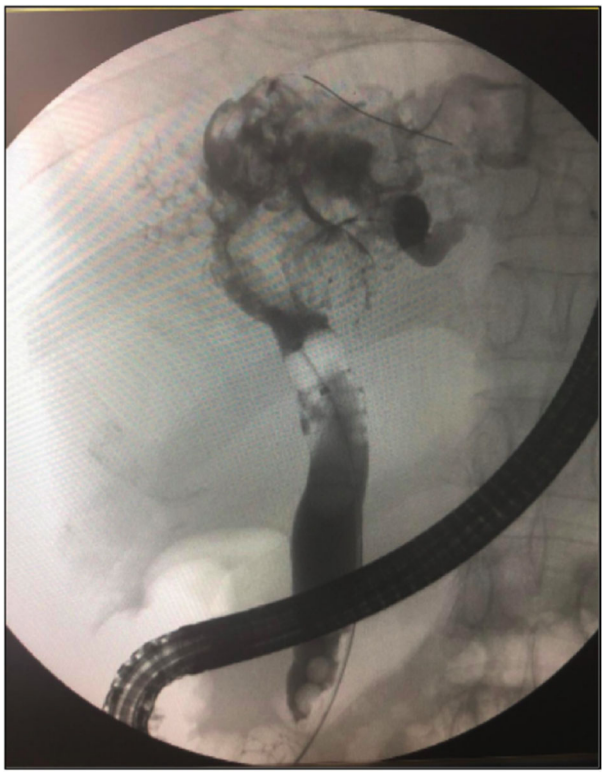
PO235 LIVER TRANSPLANTATION FOR ORIENTAL CHOLANGITIS IN EUROPE

Concepción Gómez-Gavara, Berta Pares Bofill, Rocio Martin, Mar Dalmau, Lluis Castells, Cristina Dopazo, Mireia Caralt, Elizabeth Pando Rau, Ernest Hidalgo, Itxarone Bilbao, Ramon Charco

Vall d´Hebron University Hospital

Background: Hepatolithiasis is very common in East Asia but infrequent in Western countries, and few reports have been published in European series. Recurrent pyogenic cholangitis is a chronic disease characterized by intrahepatic biliary stones and strictures. The therapeutic approach for hepatolithiasis is highly individual and includes antibiotic therapy, endoscopic retrograde cholangiopancreatography (ERCP) and percutaneous biliary drainage with stone removal and dilation of strictures, surgical resection of affected liver segments and liver transplantation (LT) (3–6).
M&M and Results: Case 1: A 41-year old-male was admitted to our hospital with bacterial cholangitis with hepatolithiasis. He was born in China and moved to Barcelona (Spain) one year earlier. Multiple ERCP were required. Due to the number of residual stones a plastic prosthesis was placed on and the patient was listed for LT. LT with with Roux-en-Y *jejunal limb biliary anastomosis* was performed. Pathological findings showed hepatolithiasis, secondary biliary cirrhosis and intraductal papillomatosis with low-grade dysplasia. During a five-year follow up period the patient remains asymptomatic.

Case 2:A 47-year old-male was referred to our hospital for biliary drainage withdrawal. The patient born in China had moved to Barcelona (Spain) 1 month before. Cholecystectomy and T-tube placement was performed 2 months earlier in China. CT scan showed dilatation of intra and extrahepatic bile ducts and multiple gallstones. After recurrent pyogenic cholangitis and bridging fibrosis the patient was listed for LT. Pathological findings showed hepatolithiasis and F3 *stage* and early *cirrhosis.*



Discussion: The main indication for LT in hepatolithiasis is secondary cirrhosis with portal hypertension although non-cirrhotic patients are also candidates if recurrent cholangitis, residual stones with multiple hospitalizations and repeated procedures are nedeed.
Conclusion: LT is a definitive method for end-stage hepatolithiasis.

PO236 SERVICE EVALUATION OF AN INTEGRATED PHARMACIST-LED MEDICATION REVIEW SERVICE TO SUPPORT OUTPATIENT CARE OF LUNG TRANSPLANT PATIENTS

Fiona Nagele[1], Pauline Ly[1], Ruth Coxhead[1], Ian Wong[2], Martin Carby[1], Anna Reed[1], Andre Simon[1], Haifa Lyster[1]
[1]Harefield Hospital; [2]UCL School of Pharmacy

Background: Post lung or heart-lung transplantation, patients must manage complex drug regimens for the remainder of their lives. Poor drug adherence, particularly immunosuppressants, is associated with adverse outcomes. A pharmacist-led medication review service was initiated in January 2017 as part of the long-term multi-disciplinary team (MDT) follow-up.
Methods: A retrospective analysis of 10 months experience following establishment of this service was performed from August 2017 to identify the pharmaceutical interventions in this patient group. A validated patient experience questionnaire (PEQ) was prospectively conducted for 2 months from April 2018.
Results: The median age of patients seen was 53 (17–75) years. The median time post-transplant was 5 (0–32) years. 406 medication reviews were performed in 310 (248 BSSLTx, 30 heart and lung, 32 single) transplant patients. A total number of 963 interventions were made.

Type of Intervention	Number of Interventions (%)
Medication knowledge/education	266 (27.6)
Review of immunosuppression and prophylactic medications against protocol	101 (10.5)
Managing drug interactions	36 (3.7)
Non-adherence identification	49 (5.1)
Medicines supply queries	170 (17.7)
Medicines reconciliation	36 (3.7)
Adverse effects management	54 (5.6)
Blood pressure management	69 (7.2)
Cholesterol management	18 (1.9)
Electrolyte management	22 (2.3)
Renal dose adjustments	12 (1.2)
Referral to other services	21 (2.2)
Advice re over-the-counter medicines	15 (1.6)
Other	94 (9.7)

The PEQ showed predominantly positive results (>3, scale 1–5) with median values ranging from 3.5/5 for overall outcome to 4.75/5 for positive emotions post consultation. The PEQ ($n = 58$) indicated a negative correlation between consultation outcome and time since transplantation, $r = -0.245$ ($p = 0.02$).
Conclusion: These results support the role of a pharmacist providing medication optimization reviews to lung or heart-lung transplant patients within the multidisciplinary outpatient setting. Further studies will determine the impact of the interventions made.

PO237 TOWARDS 3D-BIOPRINTING OF BIONIC PANCREAS: THE EFFECT OF TIME OF UV CROSSLINKING ON PANCREATIC ISLETS AFTER THE BIOPRINTING PROCESS

Marta Klak[1], Magdalena Gomółka[1], Patrycja Kowalska[1], Wojciech Święszkowski[2], Joanna Idaszek[2], Andrzej Berman[1], Katarzyna Kosowska[1], Edyta Majdańska[1], Michał Wszoła[1]
[1]Foundation for Research and Science Development; [2]Warsaw University of Technology

Introduction: 3D printing is being used more extensively in modern biomedicine. One of the problems is a proper selection of bioprinted material crosslinking method. Amongst currently used techniques we can distinguish: chemical crosslinking (e.g. Ca2 + and Sr2 +), thermal crosslinking and UV crosslinking – that last one causing the biggest discussion. UV radiation is selectively absorbed by DNA, mainly in UV-B and UV-C regions. DNA excitement results in typical photoproducts. The amount of strand breaks is very low straight after the exposition, but it can rise if cells undergo incubation.
Aim: Examining whether and how the time of UV crosslinking impacts DNA damage of pancreatic islets used in 3D bioprinting process.
Materials and methods: Swine pancreatic islets were exposed to UV radiation (365 nm) in the following time periods: 10, 30, 60, 90, 120, 180 and 300 s. In addition, we checked the influence of the 405 nm light wave, which does not meet the criteria of UV light. 405 nm light wave can also be used for crosslinking. Pancreatic islets without UV treatment were selected as a control group. Observations were carried out in two groups: the first – isolated and illuminated islets, where the comet test was performed immediately; the second – islets subjected to radiation and then incubated for 24 h. Result analysis consisted of evaluating the following: tail length, tail intensity.
Results: Together with the rise of radiation time we observed an increasing amount of damaged DNA. 10–30 s of pancreatic islets radiation resulted in 12–14% damage of cell's genetic material. 300 s of radiation caused damage to 50% of the cells. However, the biggest difference was observed while analysing the intensity of "comet's" tail in degenerated cell nuclei.
Conclusion: Crosslinking with 365 nm, good for materials without cells, can't be used as a crosslinking agent when living pancreatic islets are used for bioprinting.

PO238 WHY CORNEAL DONATION IN ITALIAN PEDIATRIC HOSPICES IS SO RARE? A QUESTIONNARIE SURVEY OF TEAM MEMBER'S ATTITUDES, KNOWLEDGE AND PRACTICE

Cristina Giugni, Cristina Giugni, Cecchi Costanza
Meyer Children Hospital

Background: Corneal transplantation is an effective treatment for restoring sight and it's feasible on most part of hospice's patient. In the last 8 years Italy produced 452 pediatric corneal donors (260 donors after cardiac death), but no official count is kept of how many corneas came from pediatric hospices. According to our experience, we propose that pediatric hospice population is a potentially underutilized source of eye tissue. There are potentially multiple reasons for this: pediatric hospice facilities are few and with small number of beds, pediatric palliative network is not formally recognized in Italy, the public information campaign on the subject is not very effective, but also, and its our main new point here, the staff is not adequately trained to inform families of the possibility of corneal donation.
Objective: To explore the knowledge and attitude about corneal donation of the palliative care team working in pediatric hospices in Italy.
Methods: Anonymous electronic survey with fixed reponse and free text component was delivered to the multidisciplinary team members of 7 official and not official pediatric hospices to test knowledge and attitude of corneal donation.
Results: Around 30% completed surveys were received. Corneal donation is a very rare event for all respondents. Even if most of them believed that corneal donation is a rewarding opportunity for families, over 80% felt that engaging donation discussion is unconfortable and not part of their roule; more than 90% have not received a specific training and expressed interest in doing so.
Conclusions: Lack of knowledge on corneal donation is a common barrier to discussing eye donation in Hospice and this could be improved by a national call, regional and local policies, prompts in documentation and availability of leaflets for staff members and families.

PO239 THE INCIDENCE OF NEUTROPAENIA WITHIN THE FIRST 12-MONTHS FOLLOWING TRANSPLANTATION: A SINGLE UK CENTRE EXPERIENCE

Mohamed Morsy, Kertana Easwarakumar, Komal Joshi, Manpreet Bawa, John Black, Anna Rizzello, Tahir Doughman, Atul Bagul
Leicester General Hospital, University Hospitals of Leicester

Aims: Neutropaenia is commonly observed following renal transplant. It often necessitates admission to hospital for isolative treatment due to the risk of opportunistic infections. Treatment includes modification of immunosuppression and the use of granulocyte colony-stimulating factors (GCSF). This potentially increases the risk of rejection and allograft loss.
Methods: one hundred eight recipients were identified with a neutrophil count of < 1.5 X103mc/l between October 2017–October 2018. Local electronic records were used to assess recipient data specifics, including blood results and episodes of neutropaenia. Data was processed and analysed using SPSS.
Results: Findings are summarised below. The mean average (± SD) is used unless specified.

NEUTROPAENIA RELATED FINDINGS	
Neutropaenic Incidence (12-months)	19.4%
WCC	2.5 (±0.85)
Neutrophils (X103mc/L)	1.19 (± 0.3)
Onset post transplant (days)	95 (± 44)
Creatinine (μmol/l)	132 (± 40)
eGFR	53.2 (± 18.8)
CMV Co-infection	0%
BK Co-infection	14%
GCFS administered	38%
MMF modified	95%
Recovery (days)	11
Episodes of rejection	0%

Discussion: Twenty-one recipients were identified as neutropaenic (19.4%) requiring admission. The average WCC was found to be 2.5. Mean neutrophil

count was 1.19 X103mc/l. The average time of onset post transplant was 95 days. The average creatinine on discovery of neutropaenia was 132 μmol/l, with an eGFR of 53. No recipients were identified as having CMV co-infection. 3 of the total 21 patients (14%) were treated for BK virus co-infection. 95% of recipients were subjected to MMF dose reductions (250 mg BD) during their admission. 1 patient had valganciclovir discontinued prior to designated course length due to refractory neutropaenia. The average time to recovery was 11 days. There were no episodes of rejection or mortality incidences to report. Further studies are required to evaluate.

PO240 PANCREAS DECELLULARIZATION PROTOCOL – BALANCE BETWEEN LOW DNA CONCENTRATION AND STRUCTURAL DAMAGE AS A CONDITION OF SUCCESSFUL RECELLULARIZATION.

Andrzej Berman, Anna Adamiok, Łukasz Kaczyński, Grzegorz Tymicki, Magdalena Gomółka, Marta Klak, Michał Wszoła
Foundation of Research and Science Development

Introduction: Recellularization is considered to be a potential way to solve the problem of organ shortage for transplantation. One of the conditions for the use of organs created in decellularization and recellularization processes is their low immunogenicity combined with low content of residual DNA. Unfortunately, the removal of residual DNA requires an aggressive decellularization protocol that causes destruction of the ECM structure, which can lead to the loss of its unique properties.
Aim: The aim of our study was to compare decellularization protocols affecting residual DNA concentration and ECM damage.
Method: We performed 15 porcine slaughterhouse harvested pancreas decellularization procedures using Triton X-100 as a detergent agent. Decellularization protocols varied in detergent pressure and volume, time of processing , dilution agent, temperature and pH. Resulting residual DNA was tested using PicoGreen assay. ECM structure was evaluated using standard microscopy, immunofluorescence, SEM and mass spectrometry.
Results: High pressure and high volume decellularization protocol is associated with lower residual DNA concentration but it leads to the ECM structure damage.
Conclusions: Optimization of the detergent flow conditions during decellularization is crucial to obtain the minimum concentration of residual DNA with possible intact ECM structure. Microscopy analysis of ECM should be considered a standard element in the assessment of the scaffold before recellularization.

PO241 HIGHER URINARY KIM-1 LEVELS FIRST DAY AFTER TRANSPLANTATION ARE ASSOCIATED WITH IMPROVED SHORT TERM GRAFT OUTCOME IN LIVING DONOR KIDNEY TRANSPLANTATION

Gertrude Nieuwenhuijs-Moeke, Marrit Talsma, Robert Pol, Michel Struys, Stefan Berger, Henri Leuvenink
Univeristair Medisch Centrum Groningen

Background: Various studies have been performed on the role of urinary biomarkers and their ability to predict graft outcome. Kidney injury molecule (KIM)-1 is barely expressed in normal kidney tissue but upregulated upon acute kidney injury, chronic kidney disease and in case of acute/chronic renal graft dysfunction. Performance of KIM-1 in kidney transplantation ranges from no prognostic performance to poor prediction of delayed graft function post transplantation. Recent evidence suggests that KIM-1 may play a role in regeneration and repair after acute kidney injury. We questioned whether urinary (u)KIM-1 levels were associated with graft outcome in living donor kidney transplantation (LDKT).
Materials and methods: This correlation analysis comprised of a post-hoc analysis of recipients participating in the VAPOR-1 study ($n = 56$). In this study KIM-1 levels were measured and corrected for creatinine in the first urine upon reperfusion, 2 h postoperatively and at day 1, 2, 6 and 9 post-transplantation. One month post-transplantation the glomerular filtration rate (GFR) was calculated with the use of the CKD-EPI formula (eGFR). At 6 and 12 months GFR was measured with the use of 125I-iothalamate (mGFR). When the mGFR was not available the CKD-EPI formula was used to calculate the eGFR (6 m $n = 4$, 12 m $n = 2$)
Results: After an initial decrease, KIM-1 levels increased on day 1 and 2 (Figure1). uKIM-1 levels at day 1 showed a significant positive correlation (r: 0.412, p: 0.002, table 1) with the GFR 1 month after transplantation. This correlation was not apparent 6 and 12 months post-transplantation.
Conclusion: In LDKT higher uKIM-1 levels the first day after transplantation are associated with improved short term graft function.

PO242 KIDNEY TRANSPLANTATION IN ELDERLY PATIENTS-OUTCOMES

Yaacov Goykhman[1], Guy Meyerovich[2], Nir Lubezki[1], Ido Nachmany[2], Roni Baruh[2], Ayelet Grupper[2], Jessie Aouizerate[2], Paulina Kaz[3], Joseph M. Klausner[2], Richard Nakache[2]
[1]Tel-Aviv Sourasky Medical Center, Sackler school of Medicine, The Nicholas and Elizabeth Cathedra of Experimental Surgery, Tel-Aviv; [2]Tel-Aviv Sourasky Medical Center, Sackler school of Medicine, Tel-Aviv University ; [3]Tel-Aviv Sourasky MC

Introduction: The number of elderly with end stage kidney disease is rapidly increasing across the world.

Geriatric patients are at an increased risk for poor dialysis-associated outcomes and have higher mortality rates compared to younger individuals.

We report our experience in kidney transplantation (KT) in elderly patients.
Methods: Retrospectively patients more than 60 years old underwent KT between 08/1995 and 06/2018 in our center. End points were patient and graft survival.
Results: One hundred seventy-nine (130 males, 49 females) patients underwent KT with either deceased donors (DD) (113) or living donors (66) grafts.8 patients underwent double KT from extended criteria DD.

Average age was 66 ± 4.3 years; 60–64 years 44%, 65–69 35%, 70 years and above 21%.

The actual grafts survival was at 1 year – 90.5%, at 5 year- 84% and 59.1% at 10 years.

Three months mortality was 5% (dt cardiac complications).

The actual patients' survival was 87.8 % at 1, 65.1 % at 5 and 36.7% at 10 years after transplantation.

The three months mortality rate at age 70 and more was 10.8%, and their actual survival was poor: 75.8 % at 1, 38 % at 5 years after transplantation.
Conclusions: Kidney transplantation in patients older than 60 years is safe, feasible, and has good graft survival. The mortality is high in patients older than 70 years and kidney transplantation should be carefully selected for such category of patients.

PO243 IDENTIFICATION OF A SET OF TRANSCRIPTS, GENE INTERACTIONS AND FUNCTIONAL CATEGORIES ASSOCIATED WITH RENAL ALLOGRAFT TOLERANCE

Carmona Carlos, Marlon Castrillon, Cristian Alvarez
Universidad de Antioquia, Facultad de Medicina, Grupo de Inmunología Celular e Inmunogenética

The mechanisms underlying transplant tolerance are not well stablished and cellular ineractions appear to be insufficient to explain this outcome. In order to understand the role of the molecular mechanisms involved in the transplantation tolerance, we focus on the search of gene expression governing this process and elucidate the signalling pathways implicated in that process.

A metanalysis was performed for seeking research original articles with renal allograft tolerance as principal subject. From 12 selected articles, we choose 66 transcripts up-regulated and 6 down-regulated were found in urine, blood and tissue of tolerant patients. Selection of transcripts was done according to p value, area under the curve, sensitivity and specificity. Transcript interaction networks were constructed implementing PathVisio. Functional categories enrichment was defined implementing Gene Ontology tool online.

By gene interaction analysis we found that transcripts up-regulated were associated with B cell differentiation, down-regulated were associated with TLR4 signalling, type 1 interferon production and other inflammatory responses. Functional categories by Gene Ontology Analysis associated up-regulated transcripts with CD4 + , CD25 + , alpha-beta T cell differentiation and immunological synapse formation as biological processes and chemokine binding, cytokine binding as molecular function; down-regulated genes were associated with TLRs signalling pathway, innate immune response-activating signal transduction. Proteasome complex was identified as cellular compartment and lipopolysaccharide receptor activity, signalling pattern recognition receptor activity as molecular function.

Tolerance appear to be marked for encourage of a regulatory milieu where predominate T and B regulatory cells as well as the signals involved in their activation. Interestingly, inflammatory pathways associated with innate immunity, mainly TLRs signalling, appear to be decreased in tolerant patients.

PO244 IMPACT OF ACUTE ON CHRONIC LIVER FAILURE ON POST-TRANSPLANT SURVIVAL AND ON LIVER AND KIDNEY OUTCOMES

Adrian Gadano, Sebastian Marciano, Ezequiel Mauro
Hospital Italiano de Buenos Aires

Objectives: To evaluate the effect of ACLF on one-year patients´ post-liver transplant (LT) survival. Additionally, we evaluated the effect of ACLF on the

development of post-LT Chronic Kidney Disease (CKD) and early allograft dysfunction (EAD).
Methods: Retrospective cohort of patients transplanted from 2010 to 2016. EASL-CLIF´s definition of ACLF was used. The risk of post-LT death, CKD and EAD was estimated with regression models weighted by inverse probability weighting considering recipient´s characteristics. Donor´s body mass index and donor risk index were included in the models as well.
Results: A total of 185 patients were included: 125 (67.6%) without ACLF, and 60 (32.4%) with ACLF. The one-year post-LT survival was 91.2% (95% CI 84.6–95.1%) in patients without ACLF versus 84.9% (95% CI 73.1–91.9%) in patients without ACLF. Post-LT CKD occurred in 43 (38.7%) patents without ACLF versus 26 (52.0%) patients with ACLF. EAD occurred in 40 (32.3%) of the patients with ACLF versus 15 (28.8%) of the patients without ACLF. No effect of ACLF was found on survival (HR 1.75; 95% CI: 0.64–4.75, $p = 0.272$), CKD (OR 1.31; 95% CI: 0.60–2.860, $p = 0.491$) or EAD (OR 0.74; 95% CI: 0.38–1.66, $p = 0.473$).
Conclusion: The presence of ACLF at the moment of LT has no impact on patient´s survival, nor on the occurrence of CKD or EAD.

PO245 COMPARATIVE STUDY OF DEATH PERCENTAGES: DIALYSIS VERSUS KIDNEY TRANSPLANT

Seba Atmane, Hamouche Moufida, Rafik Ouaret, Lynda Badaoui, Rosa Daou, Fatiha Moussi, Ouerda Noura
department of nephrology, tizi ouzou

Introduction: Kidney transplantation is today the most efficient treatment at all ages of life in terms of survival, quality of life, and the most economical for the health system. However, dialysis remains the treatment most often offered to first-line patients, which explains why it is predominant in patients who have reached the stage of the end-stage renal desease.
Materials and methods: This is a retrospective descriptive study done in our department concerning a total of 322 patients with renal insufficiency divided into 171 dialysis (hemodialysis) and 151 transplanted patients, taken care of between 2006 and October 2018.
Results: The majority of patients are placed on dialysis before considering the kidney transplant. The number of dialysis patients exceeds the number of transplant patients because of the small number of donors and the difficulties encountered during the pre-transplant assessment. 49% of transplant patients are between 30 and 65 years old and 43% are between 10 and 30 years old. In dialysis; the majority of patients are aged between 30 and 70 years old. The percentage of renal transplant deaths is 7.9%. The percentage of deaths in hemodialysis is 26.3%. Infectious complications are the cause of death in more than 50% of cases of transplant patients, particularly pulmonary infections, while cardiovascular complications dominate the causes of death in hemodialysis.
Conclusion: Our data suggest that renal transplantation is the optimal treatment for end-stage renal disease in terms of quality of life, but at the expense of a considerable risk of infection that can carry the patient, hence the importance of reinforcing preventive measures and aggressively treat any infectious syndrome in these patients.

PO246 CHANGES IN PROPROTEIN CONVERTASE SUBTILISIN/KEXIN TYPE 9 LEVELS IN THE EARLY POST-TRANSPLANT PERIOD IN KIDNEY TRANSPLANT RECIPIENTS

Christina Melexopoulou[1], Evangelos Oikonomou[2], Smaragdi Marinaki[1], Antigoni Miliou[2], Spiridon Vernadakis[3], Dimitris Tousoulis[2], John Boletis[1]
[1]Nephrology Department and Renal Transplantation Unit, Laiko General Hospital, National and Kapodistrian University of Athens; [2]1st Cardiology Department, National and Kapodistrian University of Athens University Medical School, Hippokration Hospital; [3]Renal Trasplantation Unit, Laiko General Hospital

Background: Cardiovascular disease remains the leading cause of death after kidney transplantation (KTx). Notably in the early post-transplant period cardiovascular risk is increased, especially in kidney transplant recipients from deceased compared to those of living donors. Proprotein Convertase Subtilisin/KexinType9 (PCSK9) is a newly recognized biomarker indicating high cardiovascular risk. Furthermore, it has recently become the target of inhibitory treatment. The purpose of the study is to investigate the levels of PCSK9 in the early post-transplant period among KTx recipients from deceased and living-donors.
Methods: We measured serum PCSK9 levels by ELISA in 73 consecutive KTx recipients at 3 time points, pre-KTx and 1 and 6 months post-KTx. According to donor type we separated the patients into two groups, 36 living-donor kidney recipients (LDKR group) and 37 deceased-donor kidney recipients (DDKR group).
Results: Mean age of LDKR and DDKR was 41 ± 13 and 50 ± 13 years respectively ($p = 0.004$). PCSK9 levels before transplantation were similar between the two groups (LDKR 213 ± 64 ng/ml vs. DDKR 187 ± 60 ng/ml, $p = 0.08$). At one-month post-KTx a significant increase in PCSK9 levels was observed in both groups (LDKR 298 ± 88 ng/ml and DDKR 255 ± 64 ng/ml). However, only in the LDKR group PCSK9 levels decreased significantly from month 1 to month 6 post-KTx (from 298 ± 88 to 247 ± 70 ng/ml, $p = 0.003$) while in the DDKR group they remained stable (form 255 ± 64 to 245 ± 55 ng/ml, p =NS).There was no significant difference in the use of statins. Also, there was no correlation between PCSK9 and low-density lipoprotein cholesterol (LDL-c).
Conclusion: One month post-KTx a significant increase in PCSK9 levels was observed both in deceased and living-donor kidney recipients. However, a significant decrease towards baseline occurred, only in the LDKR group. Further correlations with renal function and other cardiovascular parameters are needed.

PO247 HEART TRANSPLANTATION WITH DONORS AGE ≥ 60 YEARS OLD: SINGLE CENTRE EXPERIENCE

Concetta Di Nora, Sandro Sponga, Veronica Ferrara, Vincenzo Tursi, Giorgio Guzzi, Chiara Nalli, Andrea Lechiancole, Ugolino Livi
Azienda Sanitaria Universitaria Integrata di Udine

Background: The shortage of donor hearts for heart transplantation (Htx) still represents a crucial problem, leading to an extension of donor criteria. Encouraging data have been already proposed about survival also when older donors have been employed. However, the incidence of bradyarrhythmias requiring pacing in HTx recipients from older donor has not been investigated yet.
Objectives: To investigate the incidence of early atrioventricular (AV) block, early onset of atrial fibrillation (AF) and bradyarrhythmias needing of temporary pacemaker (PM) support in HTx recipients from donor age ≥ 60 years.
Methods: Since 1985 to March 2019, a total of 640 HTx in 624 patients have been transplanted at our Centre. Of these, 53 patients have been transplanted from donor with age ≥ 60 years old (mean donor age 62.7 ± 2.4 years). Early onset of AV block and AF was defined if < 7 days from HTx.
Results: Recipients mean age was 61 ± 11 years old, almost of them were male (85%). Mean ischemic time was 194.5 ± 58.8 min, 12 (23%) patients had previous cardiac surgery. The mean hospital stay was 35 ± 20.7 days, while mean ICU stay was 8 ± 6.6 days. Nine patients (16%) required a haemodynamic support after HTx, while 17 (32%) needed important inotropic support after HTx.

Early AV block was detected in 24 (45%) of patients, early onset of AF in 15 (28%) of patients, while temporary PM was used in 32 (60%) of cases. The mean length time of temporary PM was 3 ± 2 days after HTx. In a mean follow up of 51 ± 56 months, a total of 31 patients (60%) was alive after HTx; two patients (4%) needed permanent PM, while 3 (6%) had sudden cardiac death.
Conclusions: It could be reliable to expand the cardiac donor pool by accepting allografts from older donor. However, a careful evaluation of the early onset of rhythm related complications could be suggested to prevent life-threatening arrhythmias in recipients from older donors.

Recipient pre-operatory data	
Age, mean±SD	61 ± 11
Female sex, % (*n*)	15 (8)
Recipient post-operatory data	
Need of important inotropic support, % (*n*)	32 (17)
Need of temporary PM, % (*n*)	60 (32)
Need of permanent PM, % (*n*)	4 (2)
Early onset of FA, % (*n*)	28 (15)
Early AV Block, % (*n*)	45 (24)
ICU stay, mean±SD	8 ± 6.6
Hospital stay, mean±SD	35 ± 20.7
Death, % (*n*)	42 (22)

PO249 AN UNUSUAL CASE OF BOWEL OBSTRUCTION FOLLOWING ORTHOTOPIC LIVER TRANSPLANTATION

Gabriel Cárdenas, Fabio Ausania, Miquel Navasa, Constantino Fondevila
Hospital Clínic de Barcelona

Background: Bowel obstruction is an uncommon complication following liver transplantation. Differential diagnosis should include de novo inflammatory bowel disease, infectious and ischemic disease.
Case report: A 61-year-old female patient with hepatocellular carcinoma (HCC) and liver cirrhosis secondary to alcohol and HCV infection was submitted to orthotopic liver transplantation (OLT). Postoperative course was complicated by CMV infection and pseudomembranous colitis both successfully treated. Also, symptoms and signs of acute myocardial infarction without demonstrable coronary artery stenosis or spasm (takotsubo myocardiopathy) occurred on postoperative day 1. However, the patient recovered from these complications and was discharged on postoperative day 30 with no evidence of CMV disease and no abdominal complaints. Three weeks later, the patient was

readmitted with symptoms of intermittent bowel obstruction. Routine blood tests were normal. CT-scan showed multiple segmental stenosis of distal ileum. A MR enterography confirmed these findings. Ileoscopy was attempted but was unsuccessful. In absence of a clear diagnosis, an exploratory laparotomy was performed. Three segments of bowel stenosis at distal ileum were found and small bowel resection was performed. Final histology showed acute ileitis secondary to CMV infection. She was then treated with Ganciclovir for 6 weeks and discharged on postoperative day 15 without further complications.
Conclusion: CMV ileitis is an extremely rare cause of bowel obstruction following OLT. Diagnosis can be challenging because it may mimic other complications such as inflammatory or ischemic disease. Exploratory laparotomy and surgical resection should be considered in these cases.

PO250 HYPERTENSION IN RENAL TRANSPLANTATION

Rosa Daou, Moufida Hamouche, Atmane Sdeba, Lynda Badaoui, Rafik Ouaret, Ouarda Noura, Fatiha Moussi
department of nephrology, tizi ouzou

Introduction: Hypertension, is a frequent complication in renal transplantation, it increases the risk of cardiovascular morbidity and mortality and reduces the life of the graft..
Objective: epidemiology of hypertension, its potential causes and therapeutic management.
Materials and methods: We have realisead a retrospective study of 64 renal transplant patients between 2015 and 2018 .

Study parameters: Age, sex, causal nephropathy, substitution treatment, immunosuppressive treatment, causes of hypertension and its management.
Results: Of the 64 patients who were transplanted, 15% were hypertensive, 70% were men with a mea nage of 40 years.

The initial nephropathy was indeterminate in the majority of cases , reflux nephropathy 10%, 30% glomerulonephritis nephropathy.

Before transplantation ,70% were in hemodialysis, 10% in peritoneal dialysis and 20% pre-emptive, for the immunosuppressive treatment 30% of our patients were under neoral 70% under prograf.

The origin of hypertension: 03% stenosis of the graft artery, 03% chronic HTA, 6.5% chronic graft rejection, 1.5% indeterminate.

We treated 46% of the patients by double therapy : renin inhibitors and calcium inhibitor and monotherapy in 54%.
Conclusion: Hypertension is common in renal transplantation, favored by the immunosupression and is associated with decreased survival of the patient and the graft, its management with blood pressure objectives below 130/80 mmHg allows better graft survival and reduction of cardiovascular events.

PO251 RISK FACTORS OF EARLY ACUTE REJECTION EPISODES AND EFFECTS ON GRAFT FUNCTIONS IN LOW-IMMUNOLOGICAL RISK KIDNEY TRANSPLANT RECIPIENTS: A SINGLE-CENTER EXPERIENCE

Gizem Kumru[1], Sahin Eyupoglu[1], Damla Ors Sendogan[1], Akin Firat Kocaay[2], Acar Tuzuner[2], Sule Sengul[1], Kenan Keven[1]
[1]Ankara University Faculty of Medicine, Department of Nephrology; [2]Ankara University Faculty of Medicine, Department of General Surgery

Background: Acute rejection (AR) is associated with poor graft survival and can be reduced with induction therapy. We aimed to evaluate the risk factors of early AR episodes and effects on graft functions in low-immunological risk KTRs.
Methods: We retrospectively evaluated 213 low-immunologic risk KTRs who were grafted between January 2010 and January 2019 at Ankara University School of Medicine, Ibni Sina Hospital. Low-immunologic risk was defined as first transplantation, panel-reactive antibody and lympocyte crossmatch negativity. Recipients were divided into two groups according to the AR episode experience in two weeks posttransplantation. Data on demographics, immunologic properties and graft functions was compared between the two groups.
Results: Mean recipient age was 40 $\pm$ 12 years, of which 62% was male. 27 patients (12.7%) experienced AR episode within posttransplant two weeks, 18 (56%) of which were biopsy-proven. Mean diagnosis day was 6 $\pm$ 3 days, most of the patients were treated with anti-thymocyte globulin. No demographic data difference was observed between two groups. HLA-missmatch number and induction therapy were not associated with early AR. Tacrolimus through level was significantly lower in early AR group (6.8 $\pm$ 3.2 vs. 9.0 $\pm$ 3.5, p:0.002, respectively). Early posttransplant AR was a risk factor for acute rejection episode recurrence in follow-up ($p < 0.0001$). Serum creatinine levels at 1st, 3rd and 12nd months were higher in early AR group (p:0.001, p:0.004, and p:0.044, respectively). 5 patients (%18) who experienced early AR lost their grafts (p:0.006).
Conclusion: AR is a common complication within posttransplant two weeks, even in the low-immunologic risk KTRs at our center. Tacrolimus through level is the only factor associated with early AR and graft functions are poorer in the KTRs who experienced AR. Further studies with larger sample size are necessary to improve the prognosis in low-risk recipients.

PO252 THE NEW ROLE OF ZINC ION IN INSULIN-PRODUCING CELLS DIFFERENTIATION FROM ADIPOSE DERIVED MESENCHYMAL STEM CELLS

Yu Saito, Shogo Ohta, Tetsuya Ikemoto, Shuichi Iwahashi, Yuji Morine, Satoru Imura, Shinichiro Yamada, Mitsuo Shimada
Tokushima University

Background: We have already established effective protocols to generate insulin-producing cells (IPCs) form adipose derived mesenchymal stem cells (ADSCs) in both 2D and 3D culture (*ESOT 2017 and Pancreas 2018, Ikemoto T, Saito Y, et al.*). However, there are not simple indicators for evaluating differentiation and maturation of IPCs without cell destruction. In this study, we investigated the new role of Zn^{2+} in IPCs differentiation and maturation from ADSC.
Methods: According to our previous protocols (*Pancreas 2018*), IPCs were generated by both conventional 2D monolayer and 3D culture system with RCP petaloid μ-piece respectively. As usual indicators for IPC maturation, dithizone sating area, which was calculated by Image J, insulin staining, and static glucose stimulation tests were performed. Then, supernatant Zn^{2+} concentrations measured every two days and SOX17 and NGN3 mRNA levels of IPCs were compared.
Results: Image J analysis of Dithizon staining IPC revealed the staining intensity increased along with culture duration ($p < 0.01$), and reached the plateau at day 17. Stimulation index (SI) in 3D culture at 21 days were higher than that in conventional 2D monolayer at 21 days ($p < 0.05$). Immunofluoresce of insulin revealed clear staining of cytoplasm of 3D cultured IPC at day21. In 3D culture, supernatant Zn^{2+} concentration decreased up to day7 and dramatically increased up to day 17 and reached the plateau as Dithizon staining. SOX 17 and NGN3 mRNA expressions at day 17 were higher than these at day 0 and 7 ($p < 0.05$).
Conclusion: Supernatant Zn concentration might reflect the differentiation and maturation of IPCs from ADSCs without cell destruction and decide the suitable transplantation timing of IPCs.

PO253 RELATIONSHIP BETWEEN SERUM TOTAL CALCIUM AND IONIZED CALCIUM IN JAPANESE KIDNEY TRANSPLANT RECIPIENTS

Yuki Nakamura[1], Makoto Tsujita[2], Shogo Taira[2], Shinsuke Isobe[2], Toshihide Tomosugi[2], Kenta Futamura[2], Manabu Okada[2], Takahisa Hiramitsu[2], Toshihiro Ichimori[2], Norihiko Goto[2], Shunji Narumi[2], Yoshihiko Watarai[2]
[1]Iwate Prefectural Central Hospital; [2]Nagoya Daini Red Cross Hospital

Background: Gold standard in diagnosis of calcium abnormalities is the ionized calcium (iCa). Hidden hypercalcemia (i.e., elevated iCa with normal total calcium) is reportedly associated with an increased mortality risk in hemodialysis patients. Another study reported that European kidney transplant recipients diagnosed with hypercalcemia often exhibited underestimated serum total calcium (tCa) levels. However, data regarding the effect of iCa on mortality or graft prognosis are limited.
Methods/Materials: This cross-sectional study identified 283 Japanese kidney transplant recipients who regularly visited our hospital and underwent simultaneous venous blood gas and conventional blood tests between July and August 2018. We measured the trend of iCa and tCa in these patients, followed by calculation of the κ coefficient between iCa and tCa after separating each of the 4 categories along with these two parameters.
Results: High (>1.32 mmol/L), high-normal (1.25–1.32 mmol/L), low-normal (1.16–1.24 mmol/L), and low (<1.16 mmol/L) iCa were identified in 15 (5.3%), 119 (42.0%), 131 (46.3%), and 18 (6.4%) patients, respectively. High (>10.1 mg/dl), high-normal (9.5–10.1 mg/dl), low-normal (8.8–9.4 mg/dl), and low (<8.8 mg/dl) tCa were confirmed in 19 (6.7%), 100 (35.3%), 140 (49.5%), and 24 (8.5%) patients, respectively. No iCa or tCa category showed any significant difference except for pH. The coefficient κ between iCa and tCa was 0.361. Moreover, both sets of patients who underwent preemptive kidney transplantation (PEKT, $n = 113$) as well as those who underwent kidney transplantation after maintenance dialysis (non-PEKT, $n = 170$) revealed similar coefficient values (PEKT: $\kappa = 0.274$, non-PEKT: $\kappa = 0.409$).
Conclusions: Thus, the trend of iCa and tCa values was not entirely in agreement in Japanese kidney transplant patients. Further studies concerning the effects of iCa on mortality, graft prognosis, and other several endpoints are warranted.

PO254 MONITORING OF RENAL ALLOGRAFT FUNCTION WITH DIFFERENT EQUATIONS

Irena Rambabova Bushljetikj[1], Lada Trajceska[1], Igor Nikolov[1], Vladimir Pushevski[1], Maja Mojsova Mijovska[2], Goce Spasovski[1]
[1]University Clinic of Nephrology; [2]University Clinic of Anestehesia, Reanimation and Intensive Care

Introduction: Monitoring of graft function by creati−nine concentrations in serum and estimated glomerular fil−tration rate (GFR) is recommended after kidney trans−plantation. KDIGO recommendations on the treatment of transplant patients advocate usage of one of the exis−ting mathematical equations based on serum creati−ni−ne. We compared clinical application of two equa−tions based on serum creatinine in monitoring the function of transplanted kidney.
Methods: A total number of 55 adult patients who re−ceived their first renal allograft from living donors at our transplant center in between 2011 and 2014 were inclu−ded into the study. Renal allograft GFR was estimated by the MDRD and Nankivell formula, and correlated with clinical parameters of donors and recipients.
Results: The mean age of recipients was 35.7 ± 9.5 (ran−ge 16–58), and the mean age of donors was 55.5 ± 9.0 (34–77) years. Out of this group of 55 transplant patients, 50 (90.91%) were on hemodialysis (HD) prior to trans−plantation. HD treatment was shorter than 24 months in 37 (74%) transplant patients. The estimated GFR with MDRD equation showed the highest mean value at 6 and 12 months (68.46 ± 21.5; 68.39 ± 24.6, respecti−ve−ly) and the lowest at 48 months (42.79 ± 12.9). The highest mean level (80.53 ± 17.7) of the estimated GFR with the Nankivell equation was obtained at 12 months and the lowest (67.81 ± 16.7 ml/min) at 48 months. The values of Pear−son's correlation coefficient between the eGFR and the MDRD at 2 years after transplantation accor−ding to donor's age of r=−0.3224, and correlation between eGFR and the Nankivell at 2 years and donor's age of r=−0.2681, suggested a conclusion that eGFR was lower in recipients who had an older donors.
Conclusion: Our analysis showed difference in the calculated GFR with different equations at the same time points. Using one mathematical equation during the total post-transplantation period would be a re−co−m-mended method in orde

PO255 CD5 POSITIVE B LYMPHOCYTES EVOLUTION AFTER KIDNEY TRANSPLANTATION

Maciej Zielinski[1], Agnieszka Tarasewicz[2], Magdalena Jankowska[2], Hanna Zielińska[3], Justyna Sakowska[3], Grażyna Moszkowska[3], Alicja Debska-Slizien[4], Bolesław Rutkowski[2], Piotr Trzonkowski[3]
[1]Department of Medical Immunology, Medical University of Gdansk; [2]Department of Nephrology, Transplantology and Internal Diseases, Medical University of Gdańsk; [3]Department of Medical Immunology, Medical University of Gdańsk; [4]Department of Nephrology, Transplantology and Internal Diseases, Medical University of Gdansk

Background: Transplant tolerance is mainly mediated by IL-10 secreting regulatory T cells (Tregs) and B cells (Bregs). Bregs represent a heterogenous cell population and CD5 positive B cells are one of them. It is possible that Bregs downregulates immune response to the transplanted organ that may result in stable graft function. Thus, identification of B cell signature may be beneficial for personalized risk stratification and lead to transplant outcome improvement.
Methods/Materials: In this study, 52 low-risk kidney transplant recipients were recruited and followed-up to 24 months after transplantation for alloantibodies development and concomitant lymphocytes phenotype, as well as signs of organ rejection. Every 4 months anti-HLA antibodies, B lymphocytes phenotype, and cytokines were tested. Graft survival was assessed in extended time up to 8 years after transplantation.
Results: The most important observation was that increased CD5 + B lymphocytes levels were found in kidney transplant recipients who do produce alloantibodies in the first year after transplantation. The entire landscape of tested parameters compared between alloantibodies positive and negative recipients can be found in Figure 1. Another important observation was that 24 months after KTX comparable levels of creatinine were found for both alloantibodies positive and negative allorecipients. Interestingly, alloantibodies development was correlated with memory B cells, Rs = 0.96 (Spearman rank correlation). The 8 year graft survival rate was proportionate for (Abs+) and (Abs?); Cox-Mentel test, $p = 0.44$.
Conclusion: In this study, we demonstrated that not complicated transplant outcome was associated with CD5 + B cells. Lymphocytes B phenotype monitoring after kidney transplantation is useful for alloantibodies development and may serve as an additional marker of humoral immunity activation. These findings encourage future research on B lymphocytes and graft survival.

PO256 INFLUENCE OF SOCIOECONOMIC DISPARITY AND COMORBIDITY ON HEPATITIS B-INFECTED KIDNEY TRANSPLANT OUTCOME IN NATIONAL HEALTHCARE SYSTEM: POPULATION-BASED COHORT STUDY

Kevin Lu[1], Hao-Chung Ho[2], Kun-Yuan Chiu[3], Chen-Li Cheng[3], Shian-Shiang Wang[3], Jian-Ri Li[3], Chuan-Su Chen[3], Cheng-Kuang Yang[3], Cheng-Che Chen[3], Shu-Chi Wang[3], Chia-Yen Lin[3], Sheng-Chun Hung[3]
[1]Division of Urology, Department of Surgery and Clinicl Competences Center, Department of Medical Education/Taichung Veterans General Hospital/ National Yang-Ming University; [2]Division of Transplant Surgery, Department of Surgery/Taichung Veterans General Hospital; [3]Division of Urology, Department of Surgery/Taichung Veterans General Hospital

Background: Viral replication and liver disease progression are frequently accelerated in HBV-infected patients after kidney transplantation (KT). Even with current potent nucleos(t)ide analogue (NA) therapy, its real long-term disease nature in HBV+ KT patients remains elusive. The current study was undertaken to evaluate long-term risk-benefit of HBV+ KT in different period of NA availability and National Health Insurance reimbursement.
Method/Materials: We conducted a nationwide retrospective population-based cohort study during 2000–2013 period. The eligible patients were divided into two cohorts, HBV+ cohort and non-HBV+ cohort. The main primary outcomes were patient survival and graft survival.
Results: Of 4,438 KT patients, encompassing 416 in HBV-group and 4,422 in non-HBV group, there were no significant difference in graft survival ($p = 0.215$), but inferior patient survival ($p < 0.001$) in HBV group. HBV group had a higher incidence of liver cancer (HR:7.80, 95%CI = 4.80–12.67, $p < 0.001$), but were not significantly different from non-HBV group regarding the rate of redialysis, acute kidney injury and hepatic decompensation. In terms of renal complications that diabetes mellitus (HR:1.71, 95% CI:1.38–2.12; $p < 0.001$) and coronary artery disease (HR:1.30, 95% CI:1.03–1.65; $p = 0.030$) were independently associated with higher redialysis rate, whereas age was correlated with rates of acute kidney injury. In terms of hepatic coomplications, HBV-infected status (HR:9.40, 95% CI:5.66–15.63; $p < 0.001$) were associated with higher rate of liver cancer.
Conclusions: Financial barrier and co-morbidities impacted negatively on hepato-renal events in HBV+KT patients. Gray Rhino-socioeconomic status and co-morbidity, were a force to be reckoned with, but often put aside in effectiveness analysis, particularly in patients with medical underserve and access inequities. Equal access and optimized utility of healthcare resource were of paramount importance to improve longterm transplant outcome.

PO257 SIMULTANEOUS PANCREAS-KIDNEY TRANSPLANTATION: INITIAL EXPERIENCE OF A CENTER IN JAPAN

Shinichiro Ono, Tomohiko Adachil, Masaaki Hidaka, Koji Natsuda, Yasuhiro Maruya, Mitsuhisa Takatsuki, Susumu Eguchi
NAGASAKI UNIVERSITY HOSPITAL

Background: Simultaneous pancreas-kidney transplantation (SPK) is the established therapy for diabetes mellitus (DM) patients with associated end stage renal disease. We report the initial results of SPK in our institution.
Patients and methods: Between September 2017 and July 2018, we performed 3 cases of SPK in type 1 diabetic patients with end-stage renal disease. All grafts were procured from brain-dead donors. Clinical data were reviewed retrospectively.
Results: The recipients were 2 men and 1 woman, of overall mean age of 43 (37–50) years. Mean time from DM diagnosis and time from dialysis induction were 24 (22–31) years and 24 (7–28) months. The mean age and HbA1C value of donor were 56 (56–57) years and 5.7 (5.6–5.7) %. The pancreatic grafts were transplanted into the right iliac fossa and exocrine secretions were managed by enteric drainage. Two patients required a relaparotomy due to arterial anastomotic hemorrhage and two patients developed acute cellular rejection which were treated with steroid pulse and anti-thymocyte globulin (rabbit) (r-ATG therapy). With a median follow-up of 14 (7–16) months, patient's and all graft's survival rate are 100%. However, all patients showed normal range of HbA1C, oral glucose tolerance test showed DM pattern in one patients at 6 months after transplantation.
Conclusions: Although limited cases and short-term follow-up period, grafts and patient survival in our series are comparable to past studies. A quality pancreas transplantation program can be established in a small-volume center, although it requires further improvement in surgical techniques and meticulous managements.

PO258 EARLY AND BAD PLACE ONSET POST TRANSPLANTATION LYMPHOPROLIFERATIVE DISORDER (PTLD) AFTER LIVER TRANSPLANTATION

Sung Yub Jeong, Jung Jun Lee, Sung Hoon Choi
Bundang CHA Medical Center

Post transplantation lymphoproliferative disorder (PTLD) is the most severe complication among liver transplantation recipients, the overall incidence rate is reported to be 1% to 4%. The Oncogenic Epstein-Barr virus (EBV) is a most important pathogenic driver in early-onset cases. Monitoring EBV deoxyribonucleic acid (DNA) loads in blood is widely using to detect PTLD early in many transplantation centers. We report a case of EBV positive (EBV^+) diffuse large B-cell lymphoma (DLBCL) in patient only 2 month after liver transplantation.

A 49-year-old male visited transplantation center for 2 months post-transplantation regular medical check. He had poor general condition, complained of whole body itching sense. Liver computed tomography (CT) detected a 2.1 cm heterogenous mass at hilar area of liver, pathology of the needle biopsy confirmed the diagnosis of DLBCL. EBV polymerase chain reaction (PCR) test level was 25,300 copies/ml. Reduction of immunosuppression (RIS) was the first treatment, Rituximab monotherapy followed by CHOP (cyclophosphamide, doxorubicin, vincristine, and prednisone) treatment was repeated for six cycles.

EBV is a key role in this very early onset PTLD patient. Therefore, EBV^+ patient should be monitored during the follow-up of blood EBV PCR level transplant recipients for early detecting for PTLD.

PO259 URINARY CYTOKINES AND CHEMOKINES AS POTENTIAL BIOMARKERS OF PREDICTING ACUTE REJECTION IN LIVING DONOR KIDNEY TRANSPLANTATION

Minjung Kim, Kyungho Lee, Junseok Jeon, Hye Ryoun Jang, Jung Eun Lee, Yoon-Goo Kim, Dae Joong Kim, Wooseoung Huh
Nephrology Division, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine

Background: Intrarenal immunologic micromilieu affects the renal outcome in kidney transplantation (KT) patients. Although several previous studies investigated urinary cytokines and chemokines as potential non-invasive markers for detecting early injury after KT, clinical value of these markers is inconclusive. The diagnostic value of urinary cytokines and chemokines for predicting acute rejection (AR) in the early period after living donor KT was evaluated.
Methods: This prospective study included 77 patients who were followed up for at least 5 years. Urine samples were serially collected at the following time points; during transplantation (postoperative), 8 h, 24 h, 72 h, 1 week, 3 months, and 1 year after KT. Cytokines and chemokines including regulated on activation, normal T cell expressed and secreted (RANTES), fractalkine, interleukin (IL)-10, IL-4, IL-6, monocyte chemoattractant protein (MCP)-1, tumor necrosis factor (TNF)-Ì±, and vascular endothelial growth factor (VEGF) were measured. Infiltration of intrarenal leukocytes, T cells, and B cells was analyzed with immunohistochemistry followed by tissueFAXS.
Results: Patients were divided into either the control group ($n = 42$) or the ARÂ group ($n = 35$). Urinary MCP-1 at 1 week after KT was higher in the AR group. Post-KT 1 week urinary fractalkine, TNF-Ì±, RANTES, MCP-1, and IL-6 were significantly higher in the AR group who experienced AR within 3 months. Protocol biopsy results showed that the infiltration of total leukocytes and T cells were significantly increased in the AR group. Postoperative urinary fractalkine, IL-4, and IL-10 showed significant correlation with intrarenal leukocytes infiltration.
Conclusions: Urinary fractalkine, TNF-Ì±, RANTES, MCP-1, and IL-6 at 1 week after KT may be potential noninvasive early diagnostic markers for predicting early AR in living donor KT patients.

PO260 INDUCTION TYPE DOES NOT INFLUENCE KIDNEY GRAFT OR PATIENT SURVIVAL IN RECIPIENTS WITH A PREVIOUS LUNG TRANSPLANT IN THE UNITED STATES

Samy Riad[1], Umesh Goswami[1], Anna Adamusiak[1], Scott Jackson[2], Erik Finger[1], Marshall Hertz[1]
[1]University of Minnesota; [2]Fairview Health Services

Background: Induction regimens for kidney transplant (KT) in lung recipients vary widely among transplant centers. We sought to examine the impact of kidney induction type on kidney graft and patient survival in KT recipients with a previous lung transplant utilizing the Scientific Registry of Transplant Recipients (SRTR).
Methods: We analyzed data for adult primary KT recipients who received their kidney on or before 12/31/2015. Within this group we selected those who had a previous lung transplant. The induction type used before the kidney engraftment grouped recipients into 3 groups: depletional, non-depletional, and steroids only (those with non-standard induction regimens were excluded). Kaplan-Meier curves were produced to show patient survival and kidney graft survival following kidney transplant, stratified by kidney induction. Multivariate analysis was performed using a Cox proportional hazards model, with transplant center as a random effect. This model was further adjusted for lung induction, recipient and donor age, time from lung to kidney transplant, cause of lung disease, bilateral vs. single lung transplant and diabetes at the time of kidney transplant
Results: There were 364 adult primary kidney recipients with a previous lung transplant (KTAL) in our cohort. Of these 127 received depletional induction, 182 received non-depletional induction, and 55 received steroids only. There was no difference in death-censored kidney allograft survival or recipient survival by kidney induction type. Results were similar in the Cox proportional hazards model.
Conclusion: Type of kidney induction did not influence patient or kidney graft survival following kidney engraftment in lung transplant recipients. Non-depletional or steroid alone regimens should be the preferred choice given the higher cost and increased risk of infection associated with depletional regimens.

Figure 1 - Patient Survival by Kidney Induction

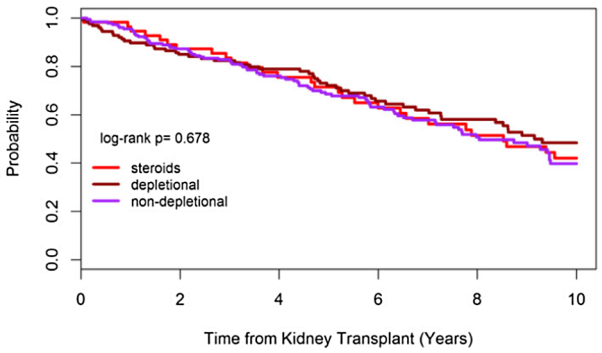
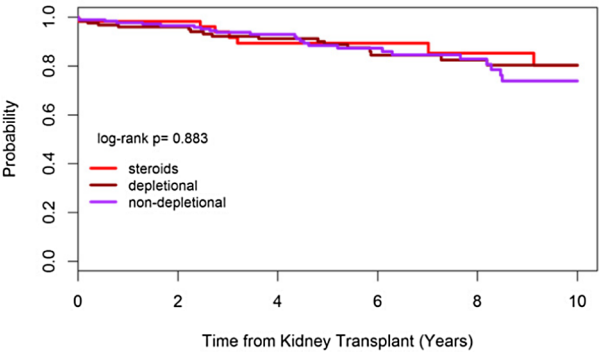


Figure 2 - Death Censored Kidney Graft Survival by Kidney Induction



PO261 INDUCTION TYPE DOES NOT INFLUENCE KIDNEY GRAFT OR PATIENT SURVIVAL IN RECIPIENTS WITH PREVIOUS HEART TRANSPLANTS IN THE UNITED STATES

Samy Riad[1], Tamas Alexy[1], Scott Jackson[2], Anna Adamusiak[1], Cindy Martin[1], Erik Finger[1]
[1]University of Minnesota; [2]Fairview Health Services

Background: Induction regimens for kidney transplant (KT) in heart recipients vary widely among transplant centers. We sought to examine the impact of kidney induction type on kidney graft and patient survival in KT recipients with a previous heart transplant utilizing the Scientific Registry of Transplant Recipients (SRTR).
Methods: Adults with primary KT up to 12/31/2015 who had a previous heart-alone transplant were included. The induction type used before the kidney engraftment grouped recipients into 3 groups: depletional, non-depletional, and steroids only. We excluded 41 subjects from multivariate analysis due to a non-standard induction regimen. Kaplan-Meier curves were generated to show time to death and kidney failure following KT. Multivariate Cox PH regression was used to evaluate these outcomes, with transplant center included as a random effect. These models were adjusted for kidney and heart induction, recipient and donor age, time between transplants, cause of heart failure, OPTN status for heart transplant, blood type, LVAD at heart transplant and DM at time of kidney transplant.
Results: There were 858 kidney transplant recipients after heart transplant (KTAH). At the time of the kidney engraftment, 356 received depletional

induction, 348 received non-depletional induction, and 154 received steroids only. There was no difference in recipient survival or death-censored kidney allograft survival by kidney induction type. Results were similar in the Cox PH models. An increased time from heart to kidney transplant was associated with a decreased risk of kidney failure following kidney transplant (HR 0.95, 95% CI 0.91, 0.99, $p = 0.02$)

Conclusion: Type of kidney induction did not influence patient or kidney graft survival following kidney transplant for those with a previous heart transplant. Non-depletional or steroid alone induction should be the preferred choice for KT in heart transplant recipients.

Figure 1 - Patient Survival by Kidney Induction

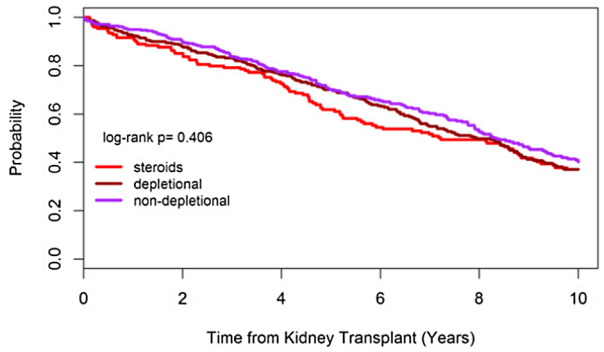
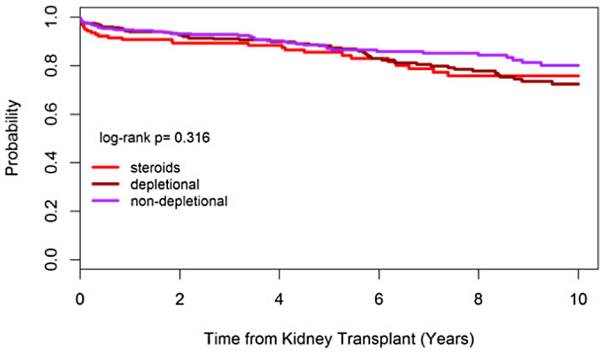


Figure 2 - Death Censored Kidney Graft Survival by Kidney Induction



PO262 LISTERIA MONOCYTOGENES CAUSING ENDOPHTHALMITIS IN LIVER TRANSPLANT PATIENT

Young Seok Han, Jaryung Han, Jae Min Chun, Sung Hoon Cho, Heon Tak Ha
Kyungpook National University, School of Medicie, Kyungpook National University Hospital

Listeria monocytogenes is known for pathogen of enteritis. In severe case, Listeria infection can cause meningoencephalitis, corneal ulcer, pneumonia, endocarditis and intrauterine or cervical infections may result spontaneous abortion in immunocompromised patients and pregnant women. *Listeria monocytogenes*causing endophthalmitis was reported, the patient with RA, the other had previous Listeria gastroenteritis history, and the last one had no underlying disease and previous history.

We experienced *Listeria monocytogenes*causing endophthalmitis in liver transplant patient who presented with ocular discharge and discomfort.

A 58-year-old male received deceased donor liver transplantation (OLT) in 2016. He underwent the steroid pulse therapy (SPT) due to hyperbilirubinemia by acute cellular rejection, at 2 year after OLT . At 1 month after SPT, he complained about ocular discomfort with discharge. In ophthalmology, anterior chamber paracentesis was performed, microbiological result was *Listeria monocytogenes*infection. Intravenous antibiotics with intravitreal antibiotics injection was administered for 1 week and immunosuppression was gradually decreased. Oral ampicillin was continued for 2 month after intravenous injection, and he recovered without complications.

Listeria monocytogenes infection may be invasive in the immunocompromised patients as above. Early diagnosis is key factor in treatment and outcomes of endophthalmitis caused by *Listeria monocytogenes*. An appropriate chamber paracentesis is important to diagnose, systemic antibiotics treatment should be considered.

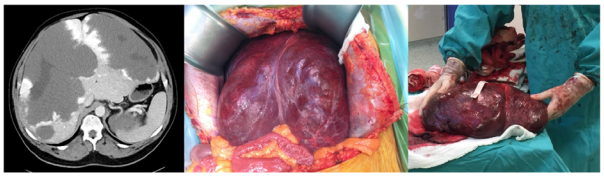
PO263 LIVING DONOR LIVER TRANSPLANTATION FOR GIANT HEMANGIOMA

Volkan Ince[1], Tolga Sahin[2], Veysel Ersan[1], Cengiz Ara[1], Sezai Yilmaz[1]
[1]liver Transplantation Institute, Inonu University; [2]inonu University, Liver Transplantation Institute

Background: Liver transplantation is curative treatment of symptomatic and unresectable giant hemangioma. Until now only 19 cases of liver transplantation due to giant hemangioma have been reported.

Case report: A 45 year-old male patient with the complaints of palor was diagnosed with anemia 3 years ago. During the investigative work up for the etiology of the anemia, incidentally lesions consistent with hemangioma were detected in the liver and followed up protocol was initiated. There was no significant increase in lesion size during the 2 years follow up.Prior to referal to our institute the lesion size increased, abdominal enlargement and distension had developed. At the time of admission there were no abnormal laboratory results except hemoglobin: 12.1 g/dl (13.6–17.2). Multi-slice computed tomography showed lesions consistent with hemangioma which were 26 x 11 cm in the right lobe of the liver, 7x4 cm in the segment 7, 20x11 cm in the left lobe and 2 cm in the segment 2. In addition, the hepatic veins and portal venous branches were not clearly visualized secondary to compression. During the 5 months follow-up period, there was no increase in lesion size in the CT scan, however, the patient was especially complaining of the swelling of the abdomen and stated that he did not want to live with the risk of hemorrhage. He was evaluated in the liver transplantation committee and it was decided to proceed with liver transplantation in this patient. His wife was eligible as a donor and the right lobe living donor liver transplantation was performed. The operation was completed without the need for blood and TDP transfusions.The patient was discharged on the 15th postoperative day without any problems. Recipient and donor are in the 23rd postoperative months and the postoperative courses are uneventful.

Conclusion: A successful living donor liver transplantation was performed to a patient with unresectable giant hemangioma without the need for blood transfusion.



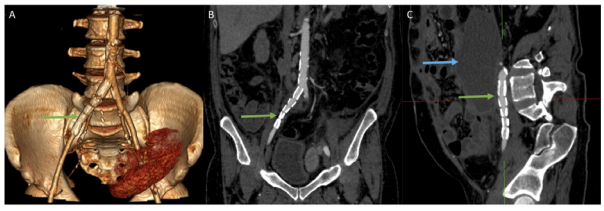
PO264 POSSIBILITIES OF INTERVENTIONAL RADIOLOGY IN PANCREAS TRANSPLANTATION COMPLICATIONS

Agnieszka Surowiecka-Pastewka[1], Michał Frączek[2], Katarzyna Sklinda[2], Marta Matejak-Górska[2], Jerzy Walecki[2], Marek Durlik[1]
[1]Mossakowski Medical Research Centre of the Polish Academy of Sciences; [2]Medical Centre of Postgraduate Education

Aim: To promote endovascular procedures for severe vascular complications after simultaneous pancreas and kidney transplantation (SPK) as a first-choice treatment.

Background: Vascular complications are rare but serious complications in pancreas transplantation. There is more data that endovascular procedures among patients after SPK are safe and less hazardous than the open approach. The impact of the contrast used during AngioCT and angiography is not proved to persistently impair the kidney graft function. For serious vascular complications we analysed: pseudoaneurysm (PSA), arteriovenous fistulas (AVF), arterioenteric fistulas (AEF) and acute common iliac artery stenosis (AS).

Findings and procedure details: Vascular complications requiring interventional radiology were observed in 6% of pancreas transplantation. We decide for endovascular procedures more often. Acute arterial thrombosis



Figures 1A, 1B, and 1C.

CT arterial phase VR reconstruction (A), coronal (B), and sagittal section images.
A patient after pancreas and kidney transplantation. Pancreas graft necrosis developed and the graft had to be removed. Pancreatic enzymes were released, which led to the destruction of the common iliac artery at the site of the former Y-graft anastomosis. The bleeding was stopped by implantation of a straight stent graft into the right common iliac artery (green arrow). Residual fluid collection (blue arrow) at the site of the former graft location.

was observed in 9 patients (4.5%) and lead to early graftectomy (at mean 7 day). There were 2 cases of arterial thrombosis in a long-term observation, after mean 1,657 days. All arterial thrombosis lead to graftectomy. There were two cases of acute common iliac artery stenosis above the pancreas graft anastomoses, that were successfully manages with endovascular stenting. After the procedure the pancreas graft function was good. In 4 cases, there was massive bleeding from ruptured pseudoaneurysms, after graftectomies. In 3 of those cases, endovascular approach was successful to stop the bleeding. In one case, open access was preferred due to chronic infection of the artery wall that required PSA resection and stenting with Gore-Tex. One patient had AVF of splenic vessels of the graft that was embolized. AEF were observed in 6 patients. 83% finished with grftectomies and 4 with recipients' death. The mean time of acute bleeding from AEF was 197 from the transplantation. ASs located below or above the pancreas graft anastomoses can be successfully managed w

PO265 FIRST LIVING DONOR TRANSPLANT IN A PATIENT AFFECTED BY SEVERE HEMOPHILIA B ASSOCIATED WITH HIV AND HCV CO-INFECTIONS: RESULTS AT A TWO YEARS FOLLOW UP

Massimo Iappelli[1], Concetta Carriero[1], C. Santoro[2], Roberto Colonnelli[3], Paolo De Paolis[3], Giampiero D'offizi[4]

[1]san camillo hospital - kidney transplant surgery; [2]policlinico Umberto I, università La Sapienza rome; [3]san camillo hospital; [4]INMI spallanzani

Introduction: The risk of developing end-stage renal disease requiring dialysis in patients affected by hemophilia B (factor IX deficiency) can increase if HIV and HCV co-infections are associated. A combination of anti-retroviral drugs, the HAART therapy, has made feasible to lead these patients to kidney transplant, improving life expectance and the quality of life either during dialysis or after transplantation.
Materials and methods: A 55 years patient was affected by sever hemophilia B (factor IX 1%), HIV and HCV co-infections and diabetes type I treated with insulin therapy. Dialysis was required, starting at 2014. In July 2017 the patient received a living kidney transplant from his sister. At the time of surgery CD4 were undetected, HIV and HCV co-infections had been eradicated by anti-retroviral and anti HCV therapies. Adequate levels of clotting factor had to be achieved in the hemophilic patient's plasma for the duration of the surgical procedure: prophylaxis with factor therapy has been administered promptly after surgery, in doses adequate to control bleeding and continued for sufficient duration until the day 28th to ensure that haemostasis or wound healing is complete.
Results: Immediate graft function, any acute rejection, surgical or infective complications occurred. The patient was discharged from the hospital on 14th post operative day. During the first year after transplant no rejection, infectious disease and negative DSAs levels were observed. CD4 levels didn't increase and there was no viral detection. Renal function still remains good at 2-yeasr follow up.
Conclusions: Kidney living transplant represents a valid surgical strategy to obtain the best short and long term results in recipients affected by hemophilia in association with HIV and HCV co-infections. The correct timing for transplant can improve the results and makes possible to allow for reducing infective or hemorrhagic risk.

PO266 NEGATIVE PRESSURE WOUND THERAPY IN THE TREATMENT OF COMPARTIMENTAL SYNDROME (CS) IN PANCREAS TRANSPLANTATION

Daniel Casanova[1], Federico Castillo[2], Gonzalo Gutierrez[2], Monica Gonzalez[2], Emilio Rodrigo[2], Juan Carlos Ruiz San[2]

[1]University Hospital Valdecilla; [2]Hospital Universitario Valdecilla

Background: The CS is a rare complication after pancreas transplant, and the treatment with negative pressure therapy allows the viability of the patient and the graft. Clinical Case : A 36-year-old male donor with a history of severe head trauma and DCD Maastrich III.Functional warm ischemia time 20 min until NECMO placement. Retrieval and preservation of pancreas and kidney with Celsior solution. The pancreas was perfused with Celsior twice due to normothermic blood reflux through the balloon of the thoracic aorta during the perfusion procedure. The recipient of 39 years on hemodialysis.Bench surgery was performed for vessels reconstruction with iliac Y. Cold ischemia: 8 h. Implant Pancreas in FID in extraperitoneal position with Roux-en-Y digestive anastomosis. Kidney in FII in extraperitoneal position. **Result**:In the first Eco-Doppler the permeable artery is objectified, and the splenic vein with a partial thrombus, with preserved venous flow. In CT control, distal splenic artery thrombosis, and splenic vein thrombosis in the tail of the pancreas. Sodium Heparin on suspicion of splenic artery thrombosis. Next day bladder catheter obstruction with clots, hematuria, blood drains, abdominal pain, and distended abdomen, with hemorrhage episode with oliguria, hyperglycemia, and in the new CT perirenal and peripancreatic hematoma. Surgery: Revision both organs , cleaning and washing.Two days later worse condition, severe hematoma in peripancreatic area. New surgery with washing and resection of the distal Y Roux by necrosis without affecting the digestive latero lateral anastomosis.Compartimental syndrome.Two days later normal glucose without insulin but evisceracion of the bowell across the wound. Surgery with negative wound therapy for two weeks.
Conclusion: Evolution of the patient after 4 years of follow-up is positive with Glucose 91, HbA1 4, 3, Creatinine 1, 4. Negative pressure therapy is a very useful treatment procedure in complex pancreas transplant situations.

PO267 ROLE OF MAGNETIC RESONANCE DTI IN PANCREAS GRAFT EVALUATION

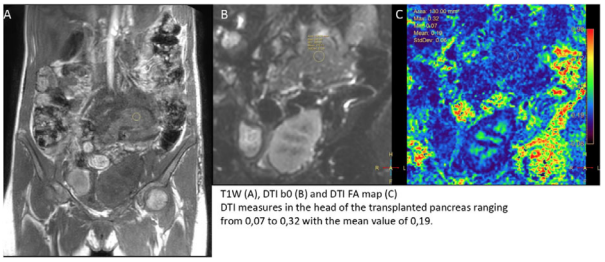
Agnieszka Surowiecka-Pastewka[1], Katarzyna Sklinda[2], Michał Frączek[2], Marta Matejak-Górska[3], Jerzy Walecki[2], Marek Durlik[1], Marek Durlik[1]

[1]Mossakowski Medical Research Centre of the Polish Academy of Sciences; [2]Medical Centre of Postgraduate Education; [3]Central Clinical Hospital of the Ministry of the Interior in Warsaw

Background: Diffusion tensor imaging (DTI) enables detection of hypoperfusion and ischemic changes but is not used routinely in MRI protocols. In DTI acuires data about the magnitude of water's mobility (ADC) and its directionality Fractional Anisotropy (FA). Hence, in this study we intend to compare the FA and ADC values among patients after pancreas transplantation in various stages. Our aim was to verify whether DTI is a reliable noninvasive tool to assess graft function.
Materials and methods: All protocols were approved by the Internal Review Board at our institution. At the time of the study they were in good general health. The examination was performed after minimum 10 days post transplantation.

No specific preparation was demanded before the MRI examination. The MRI protocols were acquired on a 3 Tesla whole body MRI Philips scanner (Philips Ingenia; Philips Healthcare, Netherlands) with the use of surface coil.
Results: We performed MRI in 19 transplanted patients, in mean age of 39. There were 14 SPKs, 2 PTAs, 1 retranspnatation and 1 PAK in the group. 67% were males. DGF and graftitis were diagnosed in 11% of cases. DGF and graftitis were associated with FA of the grafts' head (DGF median FA value 0.53, non-DGF 0.265, $p < 0.05$) as well as FA head ratio ((DGF median FA value 0.93, non-DGF 0.46, $p < 0.05$)).DGF and insulin intake also correlated with higher T1 graft - iliopsoas ratio (DGF 397, non-DGF 486, $p \leq 0.05$).
Conclusions: Our study proofs that DTI is a feasible imaging modality which is free from ionizing radiation and contrast medium administration demonstrating general postoperative intra-abdominal conditions as well as early and late complications after transplantation.

According to our study FA is a more reliable indicator than ADC in detecting early changes indicating graft rejection. DTI is a useful tool indicating prognostic value in patients short after pancreas transplantation.



T1W (A), DTI b0 (B) and DTI FA map (C)
DTI measures in the head of the transplanted pancreas ranging from 0,07 to 0,32 with the mean value of 0,19.

PO268 SHORT AND LONG-TERM OUTCOMES OF SWITCH INTO ONCE-DAILY EXTENDED RELEASE TACROLIMUS FROM IMMEDIATE-RELEASE TACROLIMUS TWICE DAILY IN LIVER TRANSPLANT RECIPIENTS

Massimo Del Gaudio[1], Lorenzo Maroni[2], Valentina Bertuzzo[2], Chiara Zanfi[2], Matteo Serenari[2], Matteo Ravaioli[2], Anna Rossetto[2], Federica Odaldi[2], Giacomo Frascaroli[2], Maria Cristina Morelli[2], Antonio Siniscalchi[2], Matteo Cescon[2]

[1]Hospital University of Bologna; [2]S.Orsola Malpighi Hospital University of Bologna

Background: The long-term safety and efficacy of substitution with a novel once-daily extended-release tacrolimus (LCPT; Envarsus®) to immediate-release tacrolimus (IR-Tac, Adoport®) twice daily in liver transplant patients have not been evaluated.
Methods: Tacrolimus trough concentrations and indices of liver function were recorded from June 2016 to November 2018, before and after LCPT substitution in 60 liver transplant recipients and compared with case matched 60 liver transplant recipients with the IR-Tac. At the time of the switch from the IR-Tac to once-daily extended release product, a 1:0.7 dose conversion was

employed and the dose of once-daily extended release tacrolimus was then adjusted to maintain trough concentrations within the therapeutic range.
Results: The tacrolimus concentration to dose (C/D) ratio, expressed as the concentration divided by daily weight-adjusted dose ([ng/ml]/[mg/kg/day]), was calculated for each trough concentration. In liver transplant patients, the mean tacrolimus concentration/dose (C/D) ratio (±SD) was 178.1 (±118.2) ([ng/ml]/[mg/kg/day]) for the IR-Tac product and 145.2 (±87.8) ([ng/ml]/[mg/kg/day]) for once-daily extended release product ($p < 0.05$). Mean total day dose (TDD) for LCPT was 30% lower than for the IR-Tac group (p , 0.001), but troughs were similar (LCPT, 6.47 ± 0.17 ng/ml; IR-Tac, 6.8 ± 0.30 ng/ml; $p < 0.4$).No change was observed in biochemical indices of liver but kidney function was better in LCPT: Initial estimated glomerular filtration rate (GFR) was 68.60 ± 21.51 ml/min versus 60.25 ± 22.00 ml/min, 6 months after conversion ($p = 0.04$) and no cases of acute rejection occurred following the substitution.
Conclusions: Liver transplant patients currently taking the IR-tacrolimus formulation may be safely switched to the once-daily extended release product (Envarsus®): lower TDD with better GFR reflects LCPT's improved bioavailability and absorption.

PO269 PATHOGENIC LUNG-INFILTRATING TH1/17 CELLS AS NEW TARGET IN CYSTIC FIBROSIS LUNG TRANSPLANTATION RECIPIENTS. PRELIMINARY RESULTS

Moira Paroni[1], Alessia Bibi[1], Gabriella Leccese[1], Raffaella Macchi[1], Alessandro Berni[2], Letizia Corinna Morlacchi[2], Valeria Musso[2], Mario Nosotti[2], Paolo Landini[1], Alessandro Palleschi[2]
[1]Department of Biosciences, Università degli Studi di Milano, Milan, Italy; [2]Fondazione IRCCS Ca' Granda - Ospedale Maggiore Policlinico

Lung transplantation (LTx) is the only treatment for end-stage lung cystic fibrosis (CF) disease after maximal therapy. Chronic lung infections in CF patients lead to a persistent activation of effector T-cells, in turn causing exacerbated inflammation, tissue damage and, ultimately, lung failure. Recent evidence showed that Th1/17 cells, secreting signature IFN-γ and IL-17 proinflammatory cytokines, can worsen inflammatory responses and contribute to CF pathogenesis. However, the pathogenic role of Th1/17 cells in CF-LTx recipients, has never been characterized.

Th1/17 cells, classical Th17 cells and regulatory T-cells (Treg) were quantified in lung biopsies and bronchoalveolar lavage (BAL) of CF and non-CF patients, before and after LTx, accordingly to their different surface markers' expression. The frequency of all subsets was stratified accordingly to clinical parameters and microbiological profile of patients.

We enrolled 21 patients (15 CF, 6 non-CF). Our preliminary results in the CF lungs compared to non-CF are showed in Figure 1A: we found significantly higher levels of Th1/17 subsets in CF patients ($p = 0.04$). In contrast, the level of Th17 cells was only slightly increased in the CF lungs, while the percentages of Th1 and Treg did not differ between the 2 groups. Interestingly, in 8 subjects' BAL, we observed a strong and selective trend of Th17 and Th1/17 cells enrichment ($p = 0.2$), but not of Th1 and Treg cells, in CF patients compared to non-CF patients (Figure 1B).

In CF lungs we observed a significantly higher number of Th1/17 cells, that rapidly increased also after LTx, suggesting an important role for Th1/17 cells in CF-LTx recipients. Further analyses are needed in order to study the relation between Th1/17 and clinical outcome, opening the door to the use of these cells as a marker of lung allograft dysfunction as well as a target for innovative therapeutic approach.

PO270 POPULATION AGING IMPACT ON PANCREAS TRANSPLANTATION

Agnieszka Surowiecka-Pastewka[1], Marta Matejak-Górska[2], Marek Durlik[1]
[1]Mossakowski Medical Research Centre of the Polish Academy of Sciences; [2]Central Clinical Hospital of the Ministry of the Interior in Warsaw

Background: Pancreas and kidney transplantation is one of the therapeutic options for selected diabetic patients with end-stage renal disease (ESRD).]. One of the absolute contraindications is estimated short patient's survival. However, there are no unequivocal recommendations considering length of estimated life- expectancy after transplantation. Population aging is a fact, but potential recipients are in better medical condition and diabetic patients' life expectancy has elongated. Limited data considering pancreas allograft among patients over 50 years old are available.
Aim: The aim of the study was to verify if mature recipients had comparable long-term pancreas transplantation outcomes than young recipients.
Material and methods: We performed a retrospective analysis of the clinical data of 172 patients who underwent a pancreas and kidney transplantation at our center in last 14 years. The analyzed parameters included: age, sex, type and duration of dialysis treatment, long-term pancreas graft survival and patient survival, overall mortality, and transplantectomies. We also analyzed serum levels of amylase, lipase, CRP, PCT and c-peptide in one end point, which was graftectomy or 3 months post transplantation. The study group was divided into two under 50 years old "<50" and over 50 "50 + ". We also analyzed length of diabetes, cardiovascular complications (infarction, coronary stenting and hypertension), small amputations prior to transplantation.
Results: The 50 + group was more frequently transplanted in the preemptive period ($p < 0.05$) and there were no patients on peritoneal dialysis. The mortality in the 50 + group was higher, but this data did not reach statistical significance. The two groups did not vary in matters of graftectomy, pancreas graft survival and patients' survival. There was no difference in length of diabetes before transplantation, cardiovascular incidences or small amputations. For both group.

PO271 COST DRIVERS OF FOLLOW-UP CARE ONE YEAR POST KIDNEY TRANSPLANT AMONG DIABETIC VERSUS NON DIABETIC RECIPIENTS AT ATERTIARY HOSPITAL IN THE PHILIPPINES

Rika Mari Katherina De Borja[1], Benita Padilla[1], Concesa Casasola[1], Carlo Irwin Panelo[2]
[1]National Kidney and Transplant Institute; [2]University of the Philippines

Background: The high cost of transplantation contributes to low kidney transplant rates in the Philippines. Follow up care is not covered in the current kidney transplant benefit package. Non-coverage can lead to poor compliance with post transplant care, especially among diabetic transplant recipients.
Objectives: We aimed to identify the average cost of follow-up care and its cost drivers among diabetic post-kidney transplant patients versus non-diabetics in the first year after transplantation.
Methods: We reviewed records of 78 post-transplant patients (39 diabetics and 39 non-diabetics) in a large government hospital in the Philippines to estimate the average direct medical cost of follow-up care in the first year of transplantation. We also determined the association of factors such as age, sex, donor source, other co-morbidities medications and hospital admissions.
Results: Diabetic recipients incurred significantly higher average cost of follow up care at PHP 982,294.84 (USD 18,653.03) versus PHP 643,707.85 (USD 12,223.52) with that of non-diabetics in the first year after transplantation. The cost of diabetic medications comprised 17 percent of the overall cost of care in diabetics. There was no significant difference in other costs of follow up care in the two groups.
Conclusion: Cost of follow up care one-year post kidney transplantation is significantly higher among diabetics. Medications accounted for the higher cost. Specifically, anti-diabetic medications account for nearly a fifth of the cost of follow up care. These findings imply the need to consider adjustments in the benefit package for diabetic transplant recipients.

PO272 ADDITIONAL VALUE OF SMARTPHONE FILM RECORDINGS FOR THE ASSESSMENT OF ORGAN QUALITY FOR LIVER TRANSPLANTATION

Judith van Grafhorst[1], Willemijn Nijboer[2], Marieke de Boer[3], Vincent de Meijer[3], Wojciech Polak[4], Janneke Vervelde[2], Joris Erdmann[5]
[1]LUMC; [2]Leiden University Medical Center; [3]University Medical Center Groningen; [4]Erasmus Medical Center; [5]Amsterdam University Medical Center

Background: Assessment of donor liver quality before transplantation remains a challenge. Besides medical history, radiology and laboratory results, macroscopic evaluation by the donor surgeon is important. However, many surgeons are reluctant to start the recipient operation based on this evaluation, thereby extending cold ischaemia times. Smartphones have made it easy to share films of donor livers. This practise is not standardized, but is being used increasingly. Aim of this study was to determine the pitfalls in the use of smartphone film recordings, and formulate suggestions for standardisation of this novel technology.
Methods: Surgeons and transplant coordinators from the three liver transplant centres in the Netherlands were asked to send films used in the screening of donor organs. All films were evaluated by an expert panel.
Results: Forty-one films were collected. Film quality was generally good (40/41). Most films only showed segments II ($n = 29$), III (40), IV (37) and V (28), but all were scored sufficient. In six films the liver was shown on the back table with all segments and anatomy. Most films were made after cold perfusion (25 vs. 16). Cirrhosis or fibrosis were reliably visible. In most cases evaluation of steatosis was difficult. Colour differences were noted between films with surgical light head on and off, as well as between films post- or pre-cold perfusion. Vascular anatomy was demonstrated in nine cases, although mostly incomplete. Evaluation by the expert panel led to upfront rejection based on the film of 11 livers.
Conclusion: Liver film recordings are used clinically, but content and quality vary. Fibrosis and cirrhosis are generally adequately visible, even in short films. Estimation of steatosis remains difficult but may be improved by standardisation of lighting conditions and film colour calibration. Development of a colour standard may improve consistency and make interpretation more reliable.

PO273 ENDOSLEEVE GASTROPLASTY FOR MORBID OBESITY IN LIVER TRANSPLANTATION: A NOVEL APPROACH FOR AN EMERGING PROBLEM. PROPOSITION OF AN INTERNATIONAL REGISTRY

Emanuele Felli, Silvana Perreta, Andrea Spota, Pietro Mascagni, Antonio Saviano, Simona Tripon, Didier Mutter, Patrick Pessaux
Hopitaux universitaires de Strasbourg

Morbid obesity is a worldwide major health problem that carries enormous socio-economic costs and a high incidence of comorbidities such as hypertension, diabetes mellitus and dyslipidemia. An increasing number of obese patients are being evaluated for liver transplantation (LT), with end stage liver disease secondary to NASH as a rapidly growing indication; the optimal approach for the obese liver transplant patient is not yet defined.

Evidence suggests that in extremely obese patients LT mortality is higher, and as well morbidity has been reported to be increased in the overall population of the obese transplanted patients. Comorbidities, especially diabetes and cardiovascular disease, play a major role and increase the long term mortality not directly related to LT. More, a part of the patients that could benefit of LT are excluded from the waiting list for extremely high BMI. Bariatric surgery is the only proven effective treatment to diminish obesity related complications, but in cirrhotic patients treated in the peri-operative period of LT (before, during or after), high rates of morbidity and mortality are reported in small single center series. Any alternative treatment that could cure, control or even improve the morbidity of obesity and related diseases would have a tremendous medical, social and economical impact, especially in this particular setting of patients. Endoscopic sleeve gastroplasty is an incisionless procedure suitable for widespread clinical adoption shown to be effective to induce weight loss. An international multicentric registry could proposed to apply this novel technique in the peri-operative period of liver transplantation, in particular to patients exluded from LT waiting list for excessive BMI and for morbid obesity associated to comorbidities.

PO274 PATIENT ORGANISATION DRIVEN INNOVATION FOR KIDNEY CARE IN NEPAL

Marieke Van Meel
NephcEurope Nepal

In February 2018 the European patient organisation NephcEurope visited for the first time Nepal. The organisation spoke to patients confronted with chronic kidney diseases about their needs amongst which were the hurdles for optimal chronic kidney care, dialysis, transplantation and medication supply.

On July 28th 2018, NephcEurope together with the National Kidney Center's Executive Director Dr. Rishi Kafle organised the first Nepalese Kidney Health Care Think Tank where numerous stakeholders in Nepalese Kidney care were present. Together they identified the most crucial needs to improve the quality of life for kidney patient care.

On August 2nd 2018, NephcEurope and Dr Rishi Kafle were invited by the Ministry of Health to a meeting with the Head of the DG Health to come and explain about their initiative and results.

During this year NephcEurope started to develop a network with the aim to connect expertise to the caregivers in Nepal. Contacts are established with local patient organisations, the National Nepalese Kidney center, The National Nepalese Transplant society and Committee to further explore what the needs are to bridge the existing gaps in kidney healthcare.

NephcEurope would like to update ESOT on her voluntary activities so far and ask the ESOT community for help to further their ambitions and bring innovation to Nepal's patients confronted with kidney related diseases and end stage organ failure.

PO275 HUMAN MONONUCLEAR CELLS DETECTED BY FLOW CITOMETRY AFTER XENOTRANSPLANT OF CELLS IN UTERO TO PRODUCE MICHROCHIMERIC PIGLETS AS DONORS

Guillermo Ramis Vidal[1], Laura Martinez-Alarcon[2], Juana M. Abellaneda Cuadrado[3], Juan J. Quereda Torres[4], Livia Mandonça Pascoal[5], Felipe Alconchel Gago[2], Antonio Ríos Zambudio[2], Antonio Muñoz Luna[1], Pablo Ramírez Romero[2]
[1]Facultad de Veterinaria, Universidad de Murcia; [2]Hospital Clínico Universitario Virgen de la Arrixaca; [3]Universidad de Murcia; [4]CEU Cardenal Herrera Valencia; [5]Universidade Federal Goiás

Background: Xenotransplant is one of the alternatives to solve the organ shortage that affect to all countries, even those with highest donationrate as Spain. However, the immunological rejection remains as the main barrier to xenotransplantation. One of the stratregies to solve it is to produce tolerance, and it has been proposed that the microchimeric animals, with human cells, would improve the tolerance and then decrease the immune rejection.

The aim was to detect human cells, or at least cells with HLA I on surface after producing microchimeric piglets.

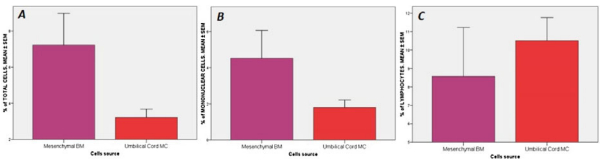
Material and methods: Human cells were injected into celomic cavity of piglets in 50th day of gestation by ecoguided ultrasonography. The cells were mesenchymal cultured cells from bone marrow (BMC) and total mononuclear cells from umbilical cord blood (UCBC). The blood from piglets ($n = 65$) obtained in 4 farrows were analysed by flow cytometry using a monoclonal antibody against HLA I A, B OR C. The animals were tested at 15th days after birth and then 2 months after the first sampling for positive animals.

Results: In blood from the first sampling, peripherical Blood Mononuclear Cells having HLA I were detected in 13 piglets (18% of total) with 4.44 $\pm$ 2.85% cells (mean $\pm$ s.d.) for total cells, 9.91 $\pm$ 4.15 for lymphocytes and 2.65 $\pm$ 2.26 for Mononuclear cells. Interestingly, there was differences for percentage of total cells ($p = 0.034$) and for mononuclear ($p = 0.05$) comparing the piglets injected with BMC or UCBC (Figure 1).

Figure 1: Mean$\pm$SEM of % of cells with HLA I A) total cells, B) mononuclear cells and C) Lymphocytes

Two months after, none of the piglets showed cells in flow cytometry.

Conclusions: Human white blood cells can be detected in microchimeric , and different cell source (umbilical cord or mesenchymal cultured cells) produce different percentage of lymphocytes, mononuclear and total cells. Cells were removed from piglets' blood in two months. So, this strategie offers a short-term approach.



PO276 USE OF BOLSTER TO PREVENT KINKING OF RENAL ARTERY DURING RENAL TRANSPLANTATION

Simon Hawlina[1], Andrej Grajn[2]
[1]University Clinical Center Ljubljana; [2]Mancester Royal Infirmary

Background: Kinking of transplant kidney renal artery can lead to graft hypo-perfusion and delayed graft function or global kidney infarction in the worse case.

Usually occurs when there is a discrepancy between the length of the vein and artery. While in most instances the problem should be addressed at the back table, sometimes it becomes obvious after clamps came off.

In such cases there is a need for re-clamping of renal vessels, shortening of the renal artery and doing re-anastomosis, which prolong warm ischemia time and has a negative impact on renal function.

In this instance, we are proposing a simple, quick and reproducible surgical method.

Fig.1 Sugicel® bolster support of the artery (illustration by Simon Hawlina)

Methods/Materials: Since 2012 we put a Surgicel® bolster under the kinking part of the renal artery in 10 cases and provide support for the artery and straighten it. Our patients were followed-up for potential early, medium and long term postoperative complications, with a mean follow up time of 3.75 years. We have measured perfusion of transplanted kidneys using Doppler ultrasound and assessed renal function with conventional laboratory tests.

Results: There were no Clevien 3 complications. The perfusion and function of transplanted kidneys were excellent. There was no need for additional surgical interventions.

Conclusion: Despite preoperative planning and back table evaluation of the graft, kink sometimes becomes evident after the graft is placed in the final position.

Alternative to the re-anastomosis we propose the use of bolster with allogenic resorbable material (Surgicel®)

The method is very effective and of great importance to maintain good function of renal transplant without the need for additional extensive maneuvers. All recipients had a good outcome in the follow-up and no additional interventions in short, medium and long term were required.

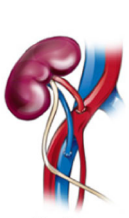


Figure 1:
Normal condition

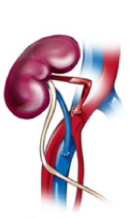


Figure 2:
Kinking of donor renal artery

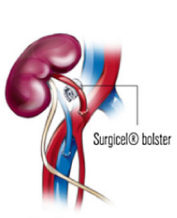


Figure 3:
Surgicel® bolster supporting kinking donor renal artery

PO277 SLEEP QUALITY MODERATES THE COMPLEX RELATIONSHIPS BETWEEN OXIDATIVE STRESS AND GLUCOSE INTOLERANCE IN NON-DIABETIC KIDNEY TRANSPLANT RECIPIENTS

Bahar Gürlek Demirci[1], Mine Sebnem Karakan[1], Ozcan Erel[2], Mehmet Kılıc[3]
[1]Yildirim Beyazit University Faculty of Medicine, Department of Nephrology; [2]Yildirim Beyazit University Faculty of Medicine, Department of Biochemistry; [3]Yildirim Beyazit University Faculty of Medicine, Department of General Surgery

Background: Sleep disorders are common in patients with chronic renal failure (CRF). Thiols play an important role in defense against reactive oxygene species. In this study, we aimed to evaluate the effect of sleep quality on oxidative stress and glucose intolerance in non diabetic kidney transplant recipients (KTR)
Methods: We enrolled 95 non diabetic kidney transplant recipients with stable allograft function. Insulin resistance was determined using HOMA score. The native thiol, total thiol and disulphide levels were measured and disulphide versus native thiol/total thiol ratios were calculated. The pittsburg sleep quality index (PSQI) was utilized to assess sleeping patterns. According to standart cut off value of PSQI (≤ 5 indicates good quality sleep; > 5 indicates poor sleep ; we stratified patients as group 1 (PSQI ≤ 5; *n*: 41) and group 2 (PSQI > 5; *n*:54). Results:The mean post transplantation time, the mean HOMA index and the mean global PSQI score were 35.0 $\pm$ 23.3 months, 2.9 $\pm$ 2.2 and 6.9 $\pm$ 3.4, respectively. The mean disulphide/total thiol and native thiol/total thiol ratio were 3.8 $\pm$ 2.4 and 84.0 $\pm$ 25.7, respectively. Patients with living donor transplantation has better sleep quality scores than kadaveric patients ($p = 0.036$).PSQI was positively and significantly correlated with age , HOMA score, body mass index, serum disulphide levels, disulphide/total thiol ratio, native/total thiol ratio and renal resistive index (RRI). PSQI was negatively correlated with total thiol levels. In subgroup analysis, HOMA score, disulphide levels, disulphide/total thiol and native/total thiol ratio were significantly lower in group 1, however total thiol level was significantly higher in this group. In regression analysis, age, HOMA score , disulphide/total thiol ratio and RRI were detected as the predictors of sleep quality. Conclusion: Sleep quality moderates oxidative stress indentified by thiol disulphide homeostasis and insulin resistance in non diabetic renal transplant recipients

PO278 COMPARISON OF THE ALLOSENSITISATION EFFECT OF BLOOD AND PLATELET TRANSFUSIONS POST RENAL TRANSPLANT

Sevda Hassan[1], Denise McKeown[2], Eva Santos-Nunez[3], Fiona Regan[2], David Taube[1], Michelle Willicombe[1]
[1]Imperial College Renal and Transplant Centre, Imperial College Healthcare NHS Trust, Hammersmith Hospital; [2]Haematology; Imperial College Healthcare NHS Trust, Hammersmith Hospital; [3]Histocompatibility and Immunogenetics; Imperial College Healthcare NHS Trust, Hammersmith Hospital

Background: Post-transplant blood transfusions are associated with HLA sensitisation, alloimmune injury and allograft failure. As class I HLA antigens are present on platelets, we hypothesise that post-transplant platelet transfusions may correlate with adverse outcomes. In this study we aim to review the outcomes associated with receiving a transfusion post-transplant and compare the individual effect of blood and platelets.
Methods: Six hundred forty-nine patients transplanted between 2015 and 2018 with at least 1 year follow up were analysed. Transfusion data was obtained from the transfusion laboratory and confirmed with patient records. We included kidney alone and SPK transplants. We excluded ABOi and HLAi transplants. All patients received monoclonal antibody induction with a tacrolimus-based maintenance immunosuppression regimen.
Results: 205/649 (31.6%) of patients were transfused; 134 (20.6%) blood alone, 21 (3.2%) platelets alone and 50 (7.7%) blood and platelets. Recipients of living donor transplants were least likely to be transfused, $p < 0.01$; whilst patients with diabetes were at risk, independent of receiving a SPK graft, $p < 0.01$. All other baseline characteristics were comparable.

Allograft outcomes by type of transfusion were compared with a control group of non-transfused patients (expressed as HR, see table). Whilst patients receiving blood were at risk of DSA, AMR and graft loss, patients receiving platelets alone were not.

	Blood Alone	Platelets Alone	Blood and platelets
Allograft survival	2.43 (0.91–6.34), $p < 0.01$	1.98 (0.15–26.19), $p = 0.60$	76.3 (27–212), $p < 0.01$
Rejection	1.36 (0.86–2.16), $p = 0.019$	1.16 (0.40–3.41), $p = 0.78$	1.89 (0.87–4.12), $p = 0.11$
AMR	2.84 (1.26–6.38), $p = 0.012$	–	12.4 (3.04–50.9), $p < 0.01$
DSA	2.02 (1.14–3.56), $p = 0.016$	0.58 (0.14–2.30), $p = 0.44$	2.68 (1.04–6.90), $p = 0.041$

Furthermore, patients requiring blood+plts did not have worse outcomes than patients requiring blood alone; graft loss, $p = 0.76$; AMR, $p = 0.13$ and DSA, $p = 0.14$ (Figure).
Conclusion: Transfusion with blood post-transplant is associated with adverse allograft outcomes, however we have not seen similar findings following platelet transfusions. To determine why an alloimmune response was not seen, further work to review the platelet characteristics is required eg.number, pooled or apheretic transfusions and the HLA mismatch.

PO279 LONG TERM (> 25 YEARS) KIDNEY ALLOGRAFT SURVIVORS. RETROSPECTIVE ANALYSIS AT A SINGLE CENTER

Grigorios Miserlis, Apostolia Zolota, Filio Solonaki, Nikolaos Antoniadis, Andreas Papagiannis, George Katsanos, Nikolaos Salveridis, Anastasia Tranta, Timotheos Deligiannidis, Konstantina Karakasi, Christina Nikolaidou, Christina Papadimitriou, Ariadne Fouza, George Imvrios, Vasileios Papanikolaou, Ioannis Fouzas
Organ Transplantation Unit/Hippokration General Hospital of Thessaloniki/ Aristotle University of Thessaloniki

Background: Despite great improvements in the short-term patient and kidney graft survival, the long-term morbidity and mortality in kidney transplant recipients still remain a significant problem. The aim of the study was to evaluate the impact of both donor and kidney transplant recipient factors as well as renal function indices on the very long-term (>25 years) kidney allograft survival.
Materials and methods: Retrospective analysis was performed on the data of 41 kidney transplant recipients (KTR) (Group A: follow-up = 25 years, 20 KTR , 10 male, mean age (M $\pm$ SD): 34.6 $\pm$ 12.6 years, 14 living donors (LD), 6 cadaveric donors (CD). Group B: follow-up > 25 years, 21 KTR , 16 male, mean age (M $\pm$ SD): 30.86 $\pm$ 12.37 years, 14 LD, 7 CD). Mean age of Group A donors: (M $\pm$ SD): 45 $\pm$ 14.7 years while in Group B was (M $\pm$ SD): 42.48 $\pm$ 14.2 years ($p = NS$). Kidney graft origin, post-kidney transplantation diabetes mellitus, HLA compatibility between donor and recipient, delayed graft function and acute rejection episodes were also analyzed retrospectively for their impact on kidney allograft function and KTR survival. Statistical analysis with Mann–Whitney test and Kaplan Mayer survival analysis was performed (SPSS 20.0 for Windows).
Results: The mean age of cadaveric donors was lower than that of LD. (CD mean age (M $\pm$ SD): 23.84 $\pm$ 16.26 years vs. LD mean age : 52.75 $\pm$ 12.42 years) ($p < 0.001$). Cadaveric kidney graft was associated with better renal allograft function in 10 , 15 and 20 years post-KT (Living donor ($n = 28$): SCreat: 10y: 1.47 $\pm$ 0.29 mg / dl, 15y: 1.44 $\pm$ 0.27 mg / dl, 20y: 1.48 $\pm$ 0.38 mg / dl vs. Cadaveric Donor ($n = 13$): 1.22 $\pm$ 0.30 mg / dl, 1.13 $\pm$ 0.26 mg / dl, 1.27 $\pm$ 0.43 mg / dl, respectively ($p < 0.001$). None of the other factors analyzed reached statistical significance between the two groups.
Conclusion: The age of the donor and the kidney graft origin are important co-factors of the very long-term kidney allograft survival.

PO280 KIDNEY TISSUE INJURY BIOMARKERS ARE PREDICTIVE FOR EARLY AND LATE KIDNEY ALLOGRAFT FUNCTION

Agnieszka Lepiesza[1], Dorota Kamińska[2], Katarzyna Kościelska-Kasprzak[2], Artur Pupka[3], Dorota Bartoszek[2], Marcelina Żabińska[2], Dariusz Patrzałek[1], Oktawia Mazanowska[2], Magdalena Krajewska[2], Dariusz Janczak[1]
[1]Department of Vascular, General and Transplant Surgery, Wroclaw Medical University; [2]Department of Nephrology and Transplantation Medicine, Wroclaw Medical University; [3]Medical Center of Vascular Diseases and Sports Medicine, Wroclaw

Background: In this study we present biomarkers of kidney tissue injury like NGAL, Il-18 and clusterine. We investigated whether these biomarkers assessed during first 24 h after transplantation can predict early and late kidney function.
Material/Methods: Eighty-eight- kidney transplant recipients (age 50.5 $\pm$ 13.9y., 30F/58M) from 46 deceased donors (age 46.9 $\pm$ 18y., 21F/26M, KDRI 1.49 $\pm$ 0.47) were included in the study.

NGAL, IL-18 and clusterin were assessed by ELISA in serum and urinary samples obtained from recipients in 6, 12 and 24 h after transplantation. Kidney function (eGFR) was evaluated for 2 years after transplantation.
Results: Serum IL-18 collected after 24 h from transplantation negatively correlated to graft function after 7 days, 1-month, 3-month post transplantation (3-month $r = -0.40$, $p = 0.021$)

Serum clusterin collected after 24 h from transplantation negatively correlated to graft function after 3-month, 6-month, 1-year post transplantation (1-year $r = -0.53$, $p = 0.003$)

Serum NGAL collected after 6, 12, 24 h from transplantation negatively correlated to graft function in early period up to 1st month post transplantation (5-day $r = -0.51$, $p < 0.001$; 7-day $r = -0.48$, $p < 0.001$; 1-month $r = -0.35$ $p = 0.010$)

Urinary IL-18 collected after 12 h from transplantation positively correlated to graft function after 1-, 3-, 6-month, 1-year, 2-year post transplantation (2-year $r = 0.48$, $p = 0.017$)

Urinary clusterin/uCr collected after 6 h from transplantation negatively correlated to graft function after 5-day, 7-day, 6-month, 1-year and 2-year post transplantation (1-year $r=-0.49$, $p = 0.009$; 2-year $r=-0.43$, $p = 0.041$)

Urinary NGAL/uCr collected after 6 and 12 h from transplantation negatively correlated to graft function after 5-day up to 2-year post transplantation (2-year $r=-0.53$, $p = 0.009$)

Conclusion: Serum and urinary biomarkers of kidney tissue injury collected during first 24 h after transplantation are predictive for early as well as late kidney allograft function.

PO281 SURVIVAL IN TRANSPLANTED PATIENTS WITH HEPATOCELULLAR CARCINOMA - FUNDENI CLINICAL INSTITUTE EXPERIENCE

Gabriela Smira, Vlad Brasoveanu, Razvan Grigorie, Florin Ichim, Simona Ichim, Mihai Pautov, Mariana Mihaila, Doina Hrehoret, Florin Botea, Irinel Popescu

Fundeni Clinical Institute

Abstract: : Hepatocellular carcinoma (HCC) is the sixth most common cancer worldwide and the third most common cause of death from cancer [1.11]. It is the most common primary tumor of the liver accounting for 90% of all primary liver tumors [12]. Mean survival is estimated to be 6 to 20 months without intervention.

Liver transplantation offers the most reasonable expectation for curative treatment while simultaneously removing the burden of the diseased liver.

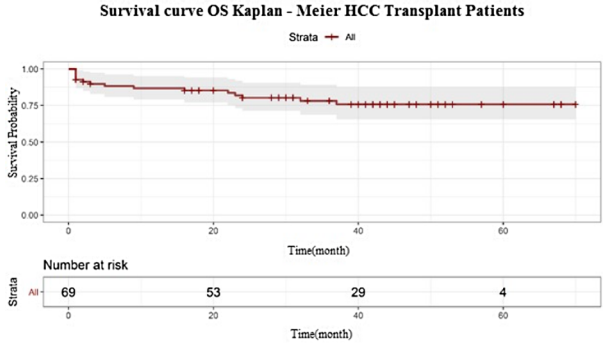
Hepatocellular carcinoma (HCC) is a major health concern worldwide, resulting from chronic liver injury and inflammation due to viral, non-viral and genetic etiologies.

Background: Orthotopic liver transplant (OLT) is a curative treatment for patients with hepatocellular carcinoma (HCC). It is widely practiced around the world, but there is no specific set of recommendations to guide physicians. Milan criteria (MC) is a starting point in selecting optimal candidates for OLT, but no consensus exists for patients whose tumors exceed beyond MC.

Methods: We perform a retrospective, non-randomized study and we analyzed 139 patients who were diagnosed with HCC and retrieved liver transplantation in our institute between 2011 and 2014. Our end- point is Overall Survival based on sex, age, HCC etiology, Milan and UCSF criteria, Edmonson- Steiner classification and AFP.

Results: In our group, overall survival was 56.34 months. We obtain mortality rate 1/5 approximate (21.37%). DFS is influenced by Millan and UCSF criteria. Patients with VHB infection has the lowest DFS.

Conclusion: Liver transplantation for treatment of hepatocellular carcinoma (HCC) is attractive because resection of the malignant tumor can be achieved while the cirrhotic liver remains at risk for the development of new lesions.



PO282 IMPACT OF AGE AND NON-ADHERENCE ON GRAFT SURVIVAL OF KIDNEY TRANSPLANTATION (KT) FROM LIVING DONORS

Yih-Jyh Lin, Shen-Shin Chang, Tsung-Ching Chou, Chung-Jye Hung, Che-Min Su, Tsung-Han Yang

National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University

Background: Age has been reported to be an important predictor on survival after KT. The demographics of living donor KT differs from transplantation with deceased donors, in which donor -recipient age matching partially regulated in some allocation systems. This study investigated the impact of age on graft survival in the cohorts with living donors.

Methods/Materials: A total of 199 pairs of living donor KT were performed in NCKU hospital, Tainan, Taiwan, between 1990 and 2015. We analyzed the correlation of graft survival with donor and recipient age by sequential adjustment of relevant parameters. parameters.

Results: Recipients and donors were divided into young group (age ≤ 40) and old group (age 41~60). Similar graft survivals were observed for recipients with grafts from young and old donors (graft survival t1/2 = 13.8 years). The young recipient group had more grafts from older donor (mean donor age 47 vs. 42), had favorable HLA matching (≤ 3 HLA mismatch 82% vs. 50%), had less grafts from living unrelated donors (9% vs. 39%), and had comparable coefficient of variance (CV) of calcineurin inhibitor trough level (53% vs. 54%). The CV of young recipients with graft failure was significantly higher than other groups, suggesting higher nonadherence rate. Graft survival of young recipient groupwas worse than old recipient group (Kaplan-Meier estimate, $p = 0.0076$). The graft survival difference at 13.8 years was 32.4% (84.1 vs. 51.7%), in favor of old recipient group, and the difference could be decreased to 13.8% after adjustment for donor age. With further adjustments for donor gender, HLA match and HLA antibody, there was still 11% difference which could not be explained by our model.

Conclusion: The reduced graft survival in young recipient group seems to correlate only partly with the difference in donor age. The unexplained difference may be attributed to higher prevalence of nonadherence.

PO283 LONG TERM OUTCOMES OF THE LIVING NON-RELATED KIDNEY DONORS: A SINGLE CENTER STUDY

Ma Michaela Liquete, Pedro Pedro, Rose Marie Liquete, Albert Capitle

INFORT

Introduction: Primary cause of ESRD are Diabetes and Hypertension in the Philippines. Increasing numbers of patients on dialysis have longer waiting time for KT. Most recipients turn to living donation. Living kidney donation becomes the definitive treatment for ESRD. Its known to have longer graft and patient survival.To date, there is no available data for long term follow up of living kidney donors.

Objectives: Study aims to determine the 5 and 10 years outcome of living donors specifically eGFR. Other outcomes measured were the development of diabetes, hypertension and proteinoria.

Method: A retrospective descriptive study of the long-term outcome of LNRD from 2007 to 2008. Data were extracted from InFORT, Inc. who provided donor care yearly up to 10 years. eGFR of the donors was evaluated using (CKD-EPI) formula. Patients are classified as having normal eGFR with values of 90–120 ml/min, mild renal impairment at 50–89 ml/min, moderate renal impairment at 30–59 ml/min, and severe renal impairment 29 ml/min. Secondary outcomes were the presence of Diabetes, Hypertension, proteinuria and mortality. Results from 131 LNRD were studied.

Discussion: Of the 131, 61 (46.5%) and 36 (27.5%) patients maintained a regular follow up for 5 and 10 years, respectively. Geographical location was the main reason for lack of followup.Donor age ranges from 20–37 years old at the time of donation. On the 5th year, 42 (68.9%) had normal eGFR. 17 (27.9%) had mild renal impairment,2 (3.3%) had moderate renal impairment. 4 (6.6%) had develped Hypertension, non had Diabetes, 18 (29.5%) had proteinuria but was resolved on the subsequent years. At 10 years, 9 (25%) had normal eGFR, 21 (58%) had mild renal impairment, 2 (5.6%) developed diabetes, 4 (6.6%) developed hypertension, 1 had proteinuria.

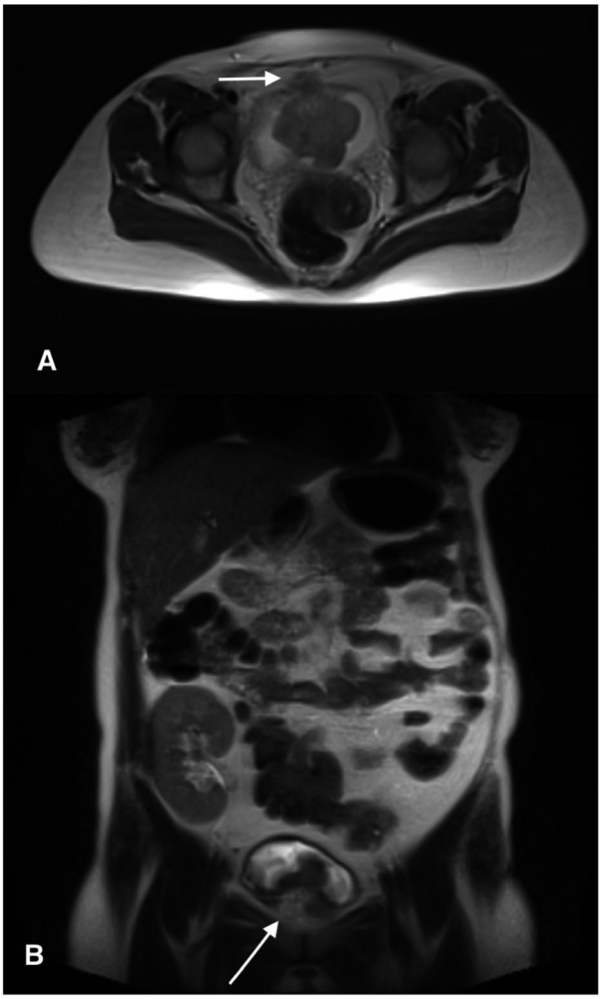
Conclusion: The study concludes Living Kidney Donation have possible risks. The foundation plans to improve follow up and to include psychosocial and quality of life analysis through lifetime monitorin

PO284 RADICAL CYSTECTOMY AND ILEAL CONDUIT DIVERSION IN A PATIENT WITH BLADDER UROTHELIAL CARSINOMA WITH SARCOMATOID AND SQUAMOSE VARIANTS AFTER RENAL TRANSPLANTATION: A CASE REPORT

Abdullah Hizir Yavuzsan, Cumhur Yesildal, Sinan Levent Kirecci, Musab Ilgi, Ahmet Tevfik Albayrak

University of Health Sciences, Sisli Hamidiye Etfal Training and Research Hospital

A 39-year-old female patient who developed urothelial carcinoma with sarcomatoid and squamose variants in the bladder with extravesical extention 3 years after kidney transplantation was presented in our report. Radical cystectomy and ileal conduit diversion were performed to the patient. For 6 months postoperatively, the patient's renal functions were stably preserved and no obstruction and hydronephrosis occurred in the transplanted kidney. Serum creatinine level was 1.53 mg/dl at 6 months postoperatively and there was no sign of the disease in the radiological and clinical investigations. Our case showed that radical cystectomy and ileal conduit diversion is a safe and feasible method in patients with renal transplantation.



Recipient Age/ Gender	Donor Age/ Gendre	Donor Graft function on admission, SCr (μmol)/ eGFR (ml/min)	Period post-transplant (months)	Type of kidney damage	Type of repair	Delayed Graft Function	Pretransplant SCr (μmol)/ eGFR (ml/min)	SCr (μmol)/eGFR(ml/min) after one month	Current SCr (μmol)/eGFR (ml/min)
41/ Female	51/Male	113/>60	37	¾ capsular degluving	Use of haemostatic glue	yes	618/7	232/16	146/49
48/Male	51/Male	113/>60	37	Complete capsular degluving	Use of haemostatic glue	yes	864/6	360/17	On Dialysis
73/Male	54/ Female	57/>60	30	Multiple renal vein damge close to the hilum, stripped ureter, shor cut L polar artery	Reconstruction of R vein/ Shortening of the ureter	No	588/9	176/26	184/25
70/Male	25/Male-Dual	63/>60	20	Stripped ureters/patchy perfusion	Shortening of the ureter, back table perfusion under pressure	No	509/10	101/67	85/78
59/ Female	54/ Female	104/51	13	Renal vein damage close to the hilum	Reconstruction of the renal vein	Yes	378/15	178/27	Urosepsis/Tx nephrectomy after 11 months
63/Male	60/ Female	45/>60	12	Renal vein damage close to the hilum	Reconstruction of the renal vein	Yes	934/5	516/10	156/41
21/ Female	17/Male	23/>60	4	Tied off main renal artery during retrieval, poorly perfused, capsular damage	Release of the tie, the artery looked healthy and soft. Kidney perfused back table and improved	Yes	560/7	130/51	107/64
64/Male	64/Male	90/>60	4	Damaged second renal artery, and arterial wall haematoma close to the hilum	Renal artery was divided, damaged section resected, R artery reconstructed	No	555/7	185/34	181/35
66/ Female	63/ Female	53/>60	2	Renal vein damage/Stripped ureter	Reconstruction of renal vein using IVC cuff/ Shortening of the ureter	No	446/9	209/21	170/27

PO285 RESCUE OF FAST TRACK DECEASED DONOR KIDNEY OFFERS DEEMED UN-TRANSPLANTABLE: BEST OUT OF THE WASTE

Mohamed Morsy, Daveen Rattan, Islam Eldiasty, John Black, Arun Kapur, Anna Rizzello, Tahir Doughman, Atul Bagul
Leicester General Hospital, University Hospitals of Leicester

Introduction: The best treatment for end-stage renal disease is kidney transplantation. However with all efforts there is a big gap between the available and demand. Fast Track (FT) offers are one of the efforts to utilise declined or placing kidneys in a hurry to get the best outcome of them. In this paper, we present our recent experience in rescuing declined kidneys by all UK centres that otherwise would have been sent for research.
Subject and methods: Since October 2015, 33 deceased donor (10 DBD, 23 DCD) kidney offers were allocated to our centre through the FT scheme. Out of these, 24 single kidney and 9 Duals. Out of these 10 kidney offers (9 single and one dual) were declined by all transplant centres in the UK and deemed un-transplantable due to vascular, ureteric or kidney damage. All were from DCD donors. All (8 single, one dual) but one (that came badly damaged, in one storage bag), were used successfully after repair of damage and allocated to recipient who are in most need in addition utilising the merits of virtual cross match to minimise the cold ischaemia time.

Details of the damage and repair are presented in the table (1) below.
Results: The outcome of the total number of FT offers is presented in another abstract. All recipients received repaired damaged kidneys are off dialysis with improving kidney function after a short period of DGF (Table 1).

Conclusion: Fast Track kidney offers is a rewarding scheme that saves many kidneys although it needs a significant logistic effort. It is worthwhile to invest effort in repairing damaged kidneys especially the ones from young donors.

PO286 FIRST LIVE DONOR NEPHRECTOMY WITH ABDOMINAL TORTUOUS AORTA AND TWO RENAL ARTERIES: A RENAL TRANSPLANTATION CASE REPORT

Mesut Demir, Cumhur Yesildal, Abdullah Hizir Yavuzsan, Sinan Levent Kirecci, Ali Ihsan Dokucu
University of Health Sciences, Sisli Hamidiye Etfal Training and Research Hospital

A 46-year-old wife and 52-year-old husband admitted to our clinic for kidney transplantation. The male patient was undergoing hemodialysis treatment for three years. In CT angiographic investigation of the female patient, there were bilateral renal double artery malformation and an abdominal severe tortuous aorta that is deviated to the left at the level of renal arteries level. And also the main artery of the left kidney originated from the aorta at the same level of truncus coeliacus. The donor was taken into a left laparoscopic donor nephrectomy operation. By laparoscopy, the main artery cannot be reached because of the upper level main renal artery and the left deviation of the tortuous aorta. So an open conversion was performed. The graft kidney was harvested and transplanted to the recipient without any complications. In donors with multiple renal arteries, laparoscopic donor nephrectomy is performed successfully in experienced hands. This case has shown us that, the presence of abdominal tortuous aorta with multiple renal arteries makes laparoscopic donor nephrectomy a very challenging procedure even preformed by an experienced surgeon. The possibility of open conversion should always be kept in mind in these cases.

PO287 LYMPHOCYTIC TUBULITIS COMMONLY CO-EXISTS WITH RENAL ALLOGRAFT PYELONEPHRITIS AND OPTIMAL MANAGEMENT IS UNKNOWN

Charlotte Seneschall, Anan Ghazy, Candice Roufosse, Michelle Willicombe
Imperial College Renal and Transplant Centre, Imperial College Healthcare NHS Trust

Background: Acute graft pyelonephritis (AGPN) is a common following renal transplantation and the diagnosis is usually made clinically rather than histologically. When biopsied, neutrophilic tubulitis is the pathognomonic feature of APGN, although lymphocytic and monocytic tubulitis suggestive of TCMR may co-exist. The pathogenesis leading to these diametric conditions is not well defined and poses a clinical conundrum of whether to treat infection, rejection or both.

In this study we describe the clinicopathological correlation and outcomes of patients with histologically proven APGN.
Methods: We identified 48 patients with histological features of APGN, defined as the presence of neutrophil casts or neutrophilic tubulitis. Patient biopsies were scored by the presence of concurrent lymphocytic tubulitis, *t*-score ≥ 2 (LT). A group of contemporaneously transplanted patients were used as controls. Mean follow up was 4.06 ± 1.31 years.
Results: Of 48 APGN patients, 24 (50.0%) were female, mean age was 52.1 ± 12.8 years, 10 (20.8%) received living donor transplants, 17 (35.5%) were caucasian, 17 (35.4%) were diabetics. Mean time to diagnosis was 8.6 (5.0–12.1) months. There were more females ($p < 0.01$) and diabetics ($p = 0.02$) in the APGN group. APGN was associated with inferior allograft survival, $p = 0.046$ and increased risk of rejection, $p < 0.01$.

15/48 (31.3%) APGN patients had concurrent LT. There was no difference in graft survival between the LT+ and LT- groups, $p = 0.26$. There was also no difference in bacteriuria, creatinine or CRP ($p > 0.05$). Only 21/48 (43.85%) patients had bacteriuria at the time of biopsy. The proportion of LT+ patients who received immunotherapy and/or antibiotics was no different compared with the LT- group, $p = 0.80$.

Conclusion: APGN has heterogeneous features both clinically and histologically. Given its detrimental impact on outcomes, a collaborative and systematic approach to its diagnosis and management is needed.

PO288 AN UPDATE: "RENAL RESISTANCE AND FLOW RATES OF KIDNEYS IN HYPOTHERMIC PERFUSION DEVICES AS FACTORS THAT AFFECT THE OUTCOMES AMONG DECEASED DONOR KIDNEY TRANSPLANT PATIENTS OF THE NATIONAL KIDNEY AND TRANSPLANT INSTITUTE"

Neilsen Nilo, Adolfo Parayno, Marc Anter Mejes
National Kidney and Transplant Institute

Background: The National Kidney and Transplant Institute employed the use of hypothermic perfusion devices in preserving renal allografts which started in October 2014. A decrease in occurence of delayed graft function among recipients were shown through the institute's data upon the use of the device. Among the biomarkers used are the flow rate and renal vascular resistance plotted at the first hour of preservation and aims to show if these factors may be used in determining graft allocation.
Methods: This is a retrospective descriptive study. Subjects employed are all adult recipients from deceased donor organs perfused using the hypothermic perfusion device including donors under Extended Criteria and excluding data from second kidney transplant from October 2014 to March 2018.
Results: There were 26 deceased donors and 39 recipients of the kidney transplant in NKTI. Sixty four percent were males and mean age is 55.9 (8.3) years old. Thirty three percent of ESRD were secondary to CGN. Thirteen percent had complications, 2.6% had acute graft rejections, 7.7% had chronic rejection and 2.6% died. Resistance per hour is associated with complication with *p*-value of 0.007. Those with complication have mean resitance per hour of 0.37 (0.24) mmHg/ml while lower among those with no complication with mean resistance per hour of 0.19 (0.11) mmHg/ml. Flow rate is not significantly different among those with complication and no complications.
Conclusion: Results of the average flow rates and resistance rates are at par with other published papers but the number of subjects versus the number of dropouts kept us from drawing significant statistical conclusion. Our experience with HPD specifically its biomarkers still needs further documentation for better analysis.

Keywords: hypothermic perfusion device; flow rates; renal resistance; deceased donors; kidney/s; transplantation

PO289 MULTIDISCIPLINARY (MDT) TRANSPLANT UTI SERVICE; CHALLENGING THE STALEMATE

James Jen Yao Chong, Adefunke Adiki, Daniel Ness, Jonathon Olsburgh, Rhana Hassan Zakri
Guy's Hospital

Introduction: Symptomatic UTIs cause detrimental effects on long-term graft function. Immunosuppression coupled with underlying renal/urological abnormality makes treating these patients complex, often multi-resistant, and difficult to eradicate. We present our initial experience of implementing a MDT transplant UTI service.
Methods/Materials: Prospective data was collated (July 2017–October 2018). Transplant patients with recurrent UTIs were eligible. Patients were seen as per transplant follow-up regime thus not requiring additional clinic visits. All new patients answered a quality of life (QOL) questionnaire, had urine dip/observations/bloods and post-void bladder scan. They received UTI 'care bundle' advice from our transplant nurse specialist. The number of subsequent UTIs, impact on graft function and QOL data was analysed.
Results: Thirty-three MDT clinics were held with interval MDT meetings to discuss complex cases. 115 new transplant patients were referred, 71% female predominance and mean age 50 years. 41% were referred within 5 years post-transplant, 17% were referred within 2 years post-transplant. 22 appointments were lost through non-attendance. 54% had at least one episode of transplant pyelonephritis, and 23% had native nephrectomy (unilateral/bilateral) prior to referral. 15/115 were discharged after first visit. 45/115 have completed 1-year follow-up with a mean improvement in graft function of 30 μmol/l; 7/45 proceeded to barbotage, and 2/45 had native nephrectomies. With referral into clinic, each new patient generated £383 and each follow-up £183; a total of £56,872 generated.
Conclusion: With antimicrobial resistance predicted to become the leading cause of death by 2050, there is a pressing need to identify risk factors, intervene early and impose antibiotic stewardship in these patients. Establishment of a transplant UTI clinic provides a pathway of specialist targeted care and facilitates investigations that accurately identify infectious foci early.

PO290 CORNEAL TISSUE PROCUREMENT: PERFORMANCE PEDIATRIC HUB CENTER

Francesca Melosi, Michele Pennica, Giuseppina Sestini, Ilaria Pietrini, Cesare Greco, Elisabetta Masini, Noelia Solano Arrojo, Marta Abarca Lopez, Ciro Romano, Andrea Cambrini
Meyer Children Hospital

Background: In pediatric age disease that cause an alteration of the curvature (keratoconus) and of the transparency (congenital, inflammatory, degenerative, traumatic) of the cornea can lead to partial or total blindness, if the damage produced is irreversible.Corneal transplantation rapresents in this case the only therapeutic possibility and in pediatric age must be considered urgent to ensure the development of a normal visual function, particulary under 6 years of age.Taking also in consideration the long life expectancy it is important that the transplant is performed using tissues with excellent biological characterist.
Method: The purpose is to demonstrate the effectiveness of the implementation program carried out in Meyer Children Hospital by the Team of Organs and Tissue donation team to increase corneal tissue procurement from DCD and DBD in the years 2014–2018 in patients under age of 12.This project has been implemented throught awareness program directed to the aspects of referral, suitability, consent, procurement time, in order to obtain the best tissue possible in this age group which is particularly important from a transplantation poin of view.The improving measures relate to:

- Continous training of doctors and nurse
- Distinction between palliative DCD and unexpected DCD referral processes
- Early evaluation of the donative potential of palliative DCD
- Care on informing about the right of donation
- Adding Hospital Coordinator in the Palliative Care Commitee
- Availability of the medical team for the explantation

Results: In the 2014–2018 period we observed

- Progressive increase procurement, from the absence of donations in 2014 to 75% of utilized corneal tissue in 2018.
- Reduction procurement time within 2 h from reporting with 0 non suitability of the tissue.

Conclusion: The corporate awareness process regarding tissues donation has led to an increase in the donative pool and an improvement in the biological characteristics of the donate tissue.

PO291 PERSONALIZED MOBILE IMMUNOSUPPRESSION ADHERENCE MONITORING: A PILOT RANDOMIZED CONTROL TRIAL OF MDOT FOR TRANSPLANTATION

Macey Henderson[1], Amrita Saha[1], Julie Langlee[2], Laura Lees[2], David Helfer[1], Arthur Love[1], Francisco Rivera[2], Madeleine Waldram[1], Dorry Segev[1], Daniel Brennan[2]
[1]Johns Hopkins University; [2]Johns Hopkins Hospital

Purpose: The leading predictor of rejection, de novo DSA, graft loss, and death among adult kidney transplant (KT) recipients is immunosuppressive medication nonadherence. An estimated one-third of kidney transplant recipients reportedly experience medication nonadherence. To understand if mobile technology with asynchronous, video directly observed therapy can be leveraged in adult KT recipients to improve medication adherence habits, we are testing the feasibility and implementation of mDOT for Transplantation in a pilot randomized control trial (RCT).
Methods: Key features of mDOT for Transplantation include a HIPAA-compliant patient-facing smartphone app and transplant provider-facing web portal, symptom and side-effect tracking and reporting, dose-by dose medication tracking capability, SMS notifications, and two-way in-app secure messaging. We are conducting an ongoing pilot RCT to evaluate mDOT on rates of post-transplant medication adherence, in preparation for a fully-powered multi-site RCT (NCT03427008). Participants are randomized to the intervention (mDOT) or control arm (standard of care) using block randomization (Figure 1). Immunosuppression is tracked over time through medical record abstraction and the self-reported immunosuppressant therapy adherence instrument. Qualitative feedback on the feasibility and usability of the mDOT smartphone app is collected from patients through a telephone interview and post-satisfaction survey at the end of their 12-weeks in the study. Complete clinical outcomes and qualitative feedback will be available at the time of ESOT.
Results: We have enrolled ($N = 10$). 50% of the patients identify as white and 50% as black. 70% of these patients are male and median age is 57.5 (IQR: 45.0, 61.0) (Table 1).
Conclusions: Designed to facilitate immunosuppression adherence and engagement with transplant providers, mDOT may be a promising technology for adult KT recipients in the post-transplant period.

Patient characteristic	Value
N	10
Age, median (IQR)	57.5 (45.0, 61.0)
Race–Black (%)	50
Race–White (%)	50
Female (%)	30
Male (%)	70

PO292 REMOTE ISCHEMIC PRECONDITIONING IN TRANSPLANTATION (RIPTRANS) - A PROSPECTIVE RANDOMIZED TRIAL

Aki Uutela, Karl Lemström, Arie Passov, Marko Lempinen, Ilkka Helanterä, Heikki Mäkisalo, Arno Nordin, Helena Isoniemi, Fredrik Åberg, Simo Syrjälä, Peter Raivio, Jan Kiss, Antti Nykänen, Christoffer Stark, Eero Pesonen, Ville Sallinen

Helsinki University Hospital and University of Helsinki

Background: Remote ischemic preconditioning (RIPC) is a concept, where temporarily induced ischemia produces protection against ischemia in a remote organ. RIPC has extensively been studied in animal models and clinically in heart surgery, but the benefits of RIPC in transplantation are unclear. The primary aim of this study is to find out whether RIPC performed in donation after brain dead-donors could decrease delayed graft function (DGF) rate of kidney transplants.
Methods/Materials: In this prospective randomized controlled trial donors planned for kidney procurement will be randomly allocated 1:1 to either RIPC or sham-procedure. RIPC will consist of brief periods of lower extremity ischemia made with a tourniquet, followed by releasing the blood flow. After the diagnosis of brain death is made, a tourniquet is placed around the donors thigh and inflated to 300 mmHg four times 5 min with 5 min pauses in between. An equal intervention is done on the donors other thigh just before transferring the donor to the operating theatre. In sham-procedure arm, the tourniquet is placed similarly but it is not inflated. Donors with hemodynamic instability or aged < 18 years will be excluded. The primary outcome is delayed graft function (DGF) of kidney transplants, which is defined as need for dialysis within the first week after transplantation. Key secondary outcomes are measurements of graft function and survival for kidney, liver, pancreas, heart and lung allografts. Based on a power calculation, 500 kidney transplantations are needed to show DGF decrease from current 25% to 15%. This trial is registered in ClinicalTrials.gov (NCT03855722).
Results : The trial will start recruiting on March 11th, 2019. Safety interim analysis will be performed after 16 donors have been randomized. Recruiting is estimated to take 3–4 years.
Conclusion: RIPTRANS trial will provide Level 1 evidence on RIPC in transplantation.

PO293 THE ROLE OF RAISED INTRA-ABDOMINAL PRESSURE (IAP) IN SIMULTANEOUS PANCREAS AND KIDNEY TRANSPLANTS

Georgios Papadakis, Torath Ameen, Nikolaos Karydis

Guy's and StThomas' NHS Trust

Introduction: Althought there are several reports for raised IAP in solid organ transplantation, in simultaneous pancreas-kidney transplants (SPK) it remains unknown whether IAP increases and if so to what extent. We conducted a pilot study to explore the incidence of intra-abdominal hypertension (IAH) in SPKs.
Methods: A prospective cohort study was undertaken in 15 Consecutive adult SPKs performed at our centre. Preoperative and postoperative IAPs along with other clinically relevant transplant-specific variables were recorded over the first 3 postoperative days (POD). A kidney only control group ($n = 6$) was included for comparison of IAPs on POD 1, 2 and 3. Clinical outcomes were monitored for a period of 3 months.
Results: Matched pair analysis demonstrated a statistically significant rise in IAP in the immediate post-operative period by a mean 3.5 mmHg ($p < 0.0001$).The peak postoperative IAP was significantly higher than the immediate postop IAP by 9.6 mmHg ($p < 0.0001$). Postoperative IAPs were significantly higher in the higher BMI group compared to the lower BMI. 36% of patients sustained grade 1, while 64% of patients sustained grade 2 to 4 IAH. Patients with late onset (>48 h) IAH had significantly higher mean IAP as compared to those with early onset (<48 h) IAH ($p < 0.0425$). Longer pancreas cold ischaemia time was associated with higher IAP on POD2 ($p > 0.02$). In the kidney control group, although the immediate postoperative IAP was increased by 1.9 mmHg ($p = 0.005$), a gradual reduction below postoperative IAP was observed on POD 1, 2 and 3 (−1.5 mmHg; $p = 0.02$).At all time points, kidney only recipients had significantly lower IAPcompared with the SPK counterparts with a maximal difference of 7.2 mmHg on POD 2 ($p = 0.004$). This pilot studywas expectedly underpowered for correlation with adverse clinical outcomes.
Discussion: This is the first study to establish an association between SPK and IAH which could have detrimental effects on graft function and survival.

PO294 EFFECT OF SPLENECTOMY AND POSTOPERATIVE PLATELET COUNT ON LIVER REGENERATION RATE AFTER LIVING DONOR LIVER TRANSPLANTATION

Yasuhiro Maruya, Masaaki Hidaka, Shinichiro Ono, Tomohiko Adachi, Koji Natsuda, Satomi Okada, Kengo Kanetaka, Mitsuhisa Takatsuki, Susumu Eguchi

Department of Surgery, Nagasaki University Graduate School of Biomedical Sciences

Introduction: The effect of splenectomy on the liver regeneration of partial graft after living donor liver transplantation (LDLT) is controversial. In recent years, some studies have revealed that platelets have strong effects on promoting liver regeneration.
Objective: This study aimed to validate the effects of splenectomy and postoperative platelet count on liver regeneration rate after LDLT.
Material and method: Fifty-three adult Japanese patients who underwent LDLT at Nagasaki University Hospital (Nagasaki, Japan) between January 2013 and March 2017 were retrospectively assessed. In our department, the preoperative platelet count required for splenectomy is $\leq 50{,}000/\mu L$. Overall, 23 and 30 patients were included in the splenectomy and without splenectomy groups, respectively. We examined the relationship between the sum of platelet count (platelet cumulative amount) on the 1st, 3rd, 5th, and 7th postoperative day and the weight of the spleen as well as liver regeneration rate 1 month after transplantation. The liver volume 1 month (1MVol) after LDLT was estimated using 3D image analysis system (SYNAPSE VINCENT). Liver regeneration rate was calculated by estimated 1MVol to graft volume (GV) and actual weight.
Result: The platelet cumulative amount was significantly higher in the splenectomy group than in the without splenectomy group. In the splenectomy group, *t* the weight of the spleen was positively correlated to the platelet cumulative amount. A weak correlation was found between the weight of the removed spleen and liver regeneration rate. With regard to liver regeneration rate, no significant difference was observed between the splenectomy and without splenectomy groups. Moreover, the platelet cumulative amount and liver regeneration rate showed a positive correlation in the splenectomy group but not in the without splenectomy group.
Conclusion: According to the evaluation of postoperative liver GV, simultane

PO295 MID-TERM OUTCOME OF AB-INITIO MAMMALIAN TARGET OF RAPAMYCIN INHIBITORS BASED-IMMUNOSUPPRESSION IN LIVER TRANSPLANT RECIPIENTS

Tommaso Maria Manzia[1], Marco Pellicciaro[2], Andrea Campisi[2], Claudia Quaranta[2], Luca Toti[2], Giuseppe Tisone[2]

[1]University of Tor Vergata; [2]Tor Vergata University

Background: Ab initio mammalian target of rapamycin inhibitors (mTORi), without corticosteroids and induction therapy has been already reported by our group after liver transplantation (LT). The aim of present study is to assess mid-term safety and efficacy of mTORi ab initio after LT.
Methods: this is a retrospective cohort observational study of 140 patients who underwent LT from July 2009 to October 2018 [89% male, median age 57 years (range 19–69)]; all recipients received mTORi-based immunosuppression associated with a low dose of calcineurin inhibitors (CNI) ($n = 131$) or mycophenolate ($n = 9$) from day 1 post-LT. Seventy-five patients (53%) were transplanted for hepatocellular carcinoma (HCC) within *up to 7 criteria*.
Results: One and three-years graft and patient's survival were 80%. The median follow-up was 25.4 (range: 1–111) months. All patients showed stable liver function over the follow-up except one patient who experienced biopsy proven acute rejection. Thirty-nine (27%) and six (4%) patients experienced new-onset dyslipidaemia and diabetes respectively; 16 (11.4%) patients required antihypertensive drugs. At the last follow-up, four (5%) patients had HCC recurrence and two (1.4%) de novo skin cancer. At last follow-up, thirty (21%) patients were on monotherapy (15% Everolimus, 6% Tacrolimus).
Conclusion: mTORi-based immunosuppression ab initio after LT seems to be safe and effective either after mid-term follow-up; although these findings required further investigation on well designed trial, Everolimus-based and low-CNI dose can be consider a valid option especially in recipients who require weak CNI-dose after LT.

PO296 DOES SIMULTANEOUS LIVER AND KIDNEY TRANSPLANTATION PROTECT FROM CHRONIC HUMORAL REJECTION? A REPORT OF OUR RESULTS

Francisco Amaral, Isabel López-López, Maria Luisa Agüera, Juan Molina, Ana Navas, Alberto Rodríguez-Benot

HU Reina Sofía

Background: Simultaneous liver and kidney transplantation (SLKT) may have long-term benefits in terms of renal graft survival. Studies suggest that the liver graft can absorb or neutralize circulating donor-specific antibodies (DSA).

This mechanism could reduce the risk of humoral rejection and subsequent loss of the renal graft.
Methods: We performed a retrospective study of 31 patients who received a SLKT. We analyzed demographic variables, transplant etiology, presence of preformed DSA (*p* -DSA) and de novo DSA (dn-DSA), incidence of renal graft rejection and patient/graft survival.
Results: Thirty-one patients received a SLKT between 1990 and 2018 in our center; 3 of them received a simultaneous triple organ transplantation (liver, kidney and pancreas). A total of 24 men and 7 women were collected. Viral infection was the most frequent cause of liver failure. Mean age at transplantation was 42 ± 17.5 years; whereas 19.3% of patients had received a previous kidney transplant.

Thirteen percent of patients had preformed anti-HLA antibodies, of which 50% were DSA at the time of transplantation which were cleared by 100% in the post-transplant (class I DSA in one patient and class II in the other). 2 patients without preformed antibodies and one with *p* -DSA developed post-transplant dn-DSA without a clinically associated humoral rejection. One of the patients with *p* -DSA had a positive XM and developed a hyperacute humoral rejection of both grafts, receiving a second liver with subsequent transplantectomy of the renal graft.

Our series presented a mean survival of SLKT (excluding exitus in < 90 days in 3 patients, due to surgical complications) of 6.52 ± 7.76 years, 2 of them receiving new kidney transplants during follow-up. The average patient survival was 8.42 ± 7.85 years.
Conclusion: Our findings match the ones described in previous studies where the neutralization of *p* -DSA and the low incidence of dn-DSA in patients receiving SLKT could be protective mechanisms of renal graft rejection.

PO298 DETERMINATION OF APPETITE AND NUTRITIONAL STATUS BEFORE AND AFTER STEM CELLS TRANSPLANTATION IN CHILDREN

Derya Suluhan[1], Dilek Yildiz[2], Hilal Kocaerkek[2], Orhan Gürsel[3]
[1]Saglik Bilimleri University; [2]Saglik Bilimleri University, Gulhane Faculty of Nursing, Ankara; [3]Gülhane Training and Research Hospital, Department of Pediatric Hematology, Ankara

Background: Unless the nutritional requirements of the sick child are met, deterioration in nutritional status and associated serious complications may occur. In children with cancer, malnutrition is quite common. Inadequate intake due to mucositis, malabsorption due to chemotherapeutic drugs, infection and the impact of malignant diseases and, increased metabolic rate may cause cachexia before and afeter stem cells transplatation in children. In this study, aim of this study was to evaluate the appetite and nutritional status of the children before and after stem cell transplantation.
Methods/Materials: In this cross-sectional study, it is aimed to reach all patients with stem cell transplantation between November 2018 and November 2019 using the slicing sampling method in the pediatric transplant units in Turkey. As measures, Body Mass Index (BMI), Mid-Upper Arm Circumference Measurement and, Pediatric Functional Assesment of Anorexia and Cachexia Therapy will be used before 7 days than the stem cell transplantation (Z1), transplantation day (T2), post-transplantation 1st day (T3), 7th day (T4) and 30th day (T5). SPSS 21 package program will be used for statistical analysis of this study.
Results: The study is ongoing. The results of the study will be presented at the congress.

PO299 SINGLE DAILY FORM OF TACROLIMUS POST LIVING DONOR LIVER TRANSPLANTATION: REAL-LIFE EXPERIENCE

Mohamed Shawkat, Ali Albenmousa, Sarra Yousif, Aziza Alajlan, Waleed Alhamoudi, Roberto Troisi, Dieter Broering, Khalid Bzeizi
King Faisal Specialist Hospital & Research Center

Background: Non-adherence to immunosup−pressive medications post liver transplant occurs in about 25% of patients. It contributes to about 20% of late acute rejection episodes and 16%–36% of graft losses. and it is a recognized contributing factor of rejection and graft loss. Number of drugs taken and frequent daily doses are known contributing factors to non-compliance. Once-daily tacrolimus (TAC-QD) formulation could thus offer the potential benefit of improved medication compliance and possibly better allograft outcomes compared to the twice daily tacrolimus (TAC-BID).
Aims: To evaluate the safety and efficacy of conversion to once daily, prolonged release tacrolimus in post living donor liver transplantation.
Methods: A retrospective, single-center conducted between June 2016 and September 2018. We selectively converted stable and long-term recipients of LDLT to (TAC-QD) based on tacrolimus trough level . All patients had no documented acute rejection at least 6 months prior to conversion. The tacrolimus dosage, trough level, liver and renal functions before conversion, and then 1, 3, 6, and 12 months after conversion were recorded.
Results: Thirty-three liver transplant recipients received (TAC-QD) during the period between June 2016 and September 2018. The mean age of the patients was 56.1 ± 13.1 years and two third of them were males. The most frequently used dose was 1 mg (13 patients, 39.4%), 5 patients (15.2%) required less than 1 mg and 5 (15.2%) patients required more than 2 mg. After a median follow up of 20 months, 21 patients (63.6%) have continued on TAC-QD with normal liver functions and no reported adverse events while 12 patients (36.4%) were converted back to TAC-BID after using it for 20–360 days. The reason for stopping TAC-QD was elevated liver enzymes which were normalized soon following conversion back the TAC-BID.
Conclusions: TAC-QD is a good alternative to twice daily tacrolimus when patient compliance is a concer.

PO300 EVALUATION OF EPTS ACCURACY FOR PREDICTION OF SURVIVAL IN KIDNEY RECIPIENTS

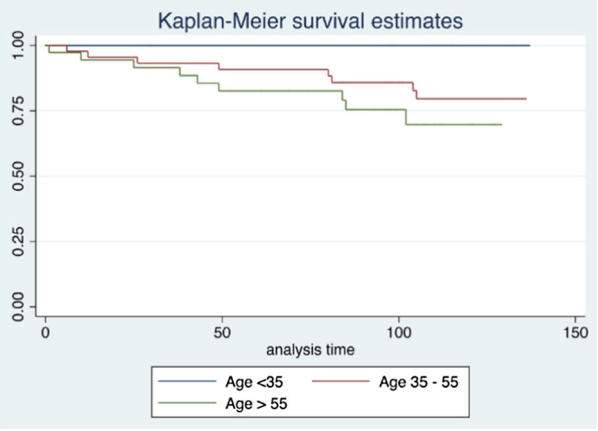
Nuno Moreira Fonseca, Ana Messias, Ana Carina Ferreira, Cecilia Silva, Francisco Remedio, Fernando Nolasco
Centro Hospitalar Universitário Lisboa Central

Introduction: The Estimated Post Transplant Survival (EPTS) score was developed and internally validated in the United States as a tool that predicts patient longevity after deceased kidney transplantation. We aimed to externally validate these scores at the Portuguese level using our transplant center cohort.
Methods: Retrospective analysis of all patients submitted to renal transplantation from 2007 to 2010 at our transplant center. Continuous variables were presented as means or medians, according to normality, and categorical variables presented as frequencies. Survival outcomes by the end of follow up were analyzed according to Kaplan-Meier survival curves.
Results: From July 2007 to December 2010, 148 adult patients received a single-kidney transplant at our center. Median age was 51 ± 12 years, with male sex (57%) predominance.

Patients were classified according to median EPTS [median 37.5 (19–56)] by quintiles (42, 36, 36, 23, 11 patients for first, second, third, fourth and fifth quintile respectively).

Follow-up was conducted until December 2018, with median follow-up time of 96 (108–120) months–8 years. During follow-up 17.6% (16) of patients died.

Performing a survival analysis, the Kaplan Meier test showed that EPTS was not significantly associated to patient death ($p = 0.17$). Contrarily, age alone (<35, 35–55, >55) showed significant accuracy ($p = 0.05$).
Conclusion: In our evaluation EPTS did not improve patient survival prediction compared to age alone. These results are not in accordance with larger series. Limited sample size may have hindered the significance of our results.



PO301 CLINICAL CASE: POST TRANSPLANTATION DIAGNOSIS OF LOW POTENTIAL MALIGNANCY IN A SMALL CLEAR RENAL CYST OF RENAL ALLOGRAFT

Mohamed Morsy[1], Arun Kapur[1], John Black[1], Islam Eldiasty[1], Sameh Mayaleh[1], Anna Rizzello[1], Tahir Doughman[1], Atul Bagul[1], Peter Furness[2]
[1]Leicester General Hospital, University Hospitals of Leicester; [2]University Hospitals of Leicester, Leicester Royal Infirmary

Introduction: Risk of donor transmitted cancer through renal allograft is well documented in literature. Pre-implantation histology of renal allograft lesions is desirable but not always feasible due to logistics especially out of hours. Small,

simple and/or solitary renal cortical cysts are considered innocuous for transplantation. We present a case of multicysytic renal tumour of low malignant potential in a clear simple cyst.
Donor: A 47 years old male DCD donor with eGFR > 60. Back-table examination showed 3 small clear cysts (3, 5 and 20 mm in diameter). The larger upper pole cyst was de-roofed and sent for histology.
Recipient: A 42 years old male with ESRD due to IgA nephropathy, had previous 2 kidney transplants in 2012 that lasted 3.5 years and another in 2016 that lasted few weeks and lost due to severe rejection and nephrectomised. He was on haemodialysis since. The kidney graft sustained WIT of 9 min and CIT of 11 h. The patient is still dialysis dependent 2-week post-transplant with improving urine output.
Histopathological examination: Macroscopically, the sample submitted for histology was indistinguishable from the roof of a simple cortical cyst. However, histologically its lining included an incomplete layer of cells with moderately pleomorphic nuclei and abundant clear cytoplasm. Cytologically, indistinguishable from an ISUP Grade 2 renal clear cell carcinoma but without any solid areas. This was reviewed by two consultant histopathologists who agreed that it would best be classified as a 'multicystic renal tumour of low malignant potential'.
Discussion: Such a variety of renal cell tumour is reported in literature as rare entity with very low potential for metastasis in an otherwise normal individual. However, definite tissue diagnosis after allograft implantation not only required modification in standard immunosuppression protocol in the recipient but also opens the door for revisiting the guidelines in handling simple cortical renal cysts.

PO303 LIVING DONOR KIDNEY TRANSPLANTATION: OVERCOMING SEX DISPARITY IN JAPAN

Mikiko Yoshikawa
Kobe University Hospital

Background and aid: Despite its superior outcomes relative to chronic dialysis, living kidney transplantation are less likely to occur in female in Japan. The aim of this study was to understand sex differences in the context of potential barriers to living donor.
Method: This is a retrospective single center study of living donor kidney transplant recipients and donors who received 2003 to 2018 (n = 185 cases). We analyzed their background and decision-making process of living donor kidney transplantation. Chi square and multiple logistic regression methods were used to determine factors associated with the decision.
Result: Sixty-seven recipients (36.2%) and 118 donors (63.8%) were female. Age of recipients was 41 ± 15 (7–73) y.o. and donors were 56 ± 10 (30–81) y.o.. Who donated kidney were wives (n = 43, 23.2%), husbands (n = 23, 12.4%), mothers (n = 59, 31.9%), fathers (n = 37, 20.0%) and others (n = 20, 12.4%). Males were less likely to become a living donor if there was no decision support about kidney transplantation by medical staff (women vs. men odds ratio, 2.05; 95% confidence interval, 1.047 to 4.050, p = 0.039). On the other hand, if transplant-familiar staff supported end-stage renal disease patients and potential living donors during the decision-making process, such sex disparity was disappeared (p = 0.039).
Conclusion: In order to enhance equal access to living donor kidney transplantation, it is important to make a collaborative effort to develop transplant-familiar nephrologists to support decision-making about renal-replacement therapy in Japan.

PO304 EFFECTS OF OMEGA-3 FATTY ACIDS ON OUTCOME AFTER LIVING DONOR RIGHT HEPATECTOMY: A PILOT STUDY

Sanghoon Lee, Jinsoo Rhu, Jong Man Kim, Gyu Seong Choi, Jae-Won Joh, Suk-Koo Lee
Samsung Medical Center, Sungkyunkwan University School of Medicine

Background: Preclinical data suggest that supplementation of omega-3 fatty acids may be beneficial in liver resections, by ameliorating ischemic injury during the surgical procedure. In this trial, we will assess the use of a fish oil-based lipid emulsion as a potential preconditioning strategy for the reduction of ischemic injury in living liver donation.
Method: This trial was a prospective, open-label, single-arm trial to assess the effect of two preoperative doses of 10% purified fish oil-based lipid emulsion (Omegaven, Fresenius-Kabi) on outcome after living donor right hepatectomy. Live liver donors scheduled to undergo right hepatectomy were given preoperative infusions of Omegaven 100 ml, on the day prior to surgery and on the morning of surgery.
Results: Ten donors were enrolled in the trial from January to July of 2018. Nine donors completed the trial. One subject did not undergo liver donation due to moderate steatosis upon liver biopsy and was dropped from the trial. All patients underwent fully laparoscopic right hepatectomy and mean operative time was 273 min. Estimated blood loss during surgery was 238.9 ml and none of the patients received intraoperative red blood cell (RBC) transfusions. One patient required postoperative RBC transfusion. Peak postoperative aspartate aminotransferase and alanine aminotransferase levels were 205.3 U/L and 233.1 U/L, respectively. Values peaked on the day of surgery or postoperative day 1 and continued to decline during the first 5 days. The serum total bilirubin peaked on postoperative day 1 with a mean of 2.7 mg/dl. The peak mean prothrombin time international normalized ratio was 1.65. All donors were discharged without complications.
Conclusion: Fish oil-based lipid emulsion were safe to use prior to surgery in living liver donors.

PO305 DECEASED DONOR WITH MENINGITIS AND ENCEPHALITIS: BE AWARE AND THINK TUBERCULOSIS

Raquel Stucchi[1], Elaine Ataide[2], Simone Perales[2], Larissa Costa[2], Lilka Boin[2]
[1]State University of Campinas; [2]state University of Campinas

Donors who have died as a result of meningitis and/or encephalitis (M/E) are of potential risk risk of transmitting infections to the recipients. Cases of M/E transmission have been described in the United States (US) and Europe, with the transmission often proving fatal. The risk of disease transmission needs to be evaluated.
We describe a donor-derived tuberculosis in a liver transplant recipient. : On Jan 8th 2019, a 28 yo man was admitted at UCI complain headache, fever and mental confusion since Jan 5th 2019 . LCR showed 211 leukocytes, with no bacteria at Gram's colour and BAAR negative. The CT scan showed brain ischaemia and raised intracranial pressure and patient was submitted to ventriculoperitoneal shunt. On 10th 2019 LCR with 0 leukocytes. On 16th 2019 it was diagnosed the brain death and he became a donor organ.

On 16th 2019 it was performed a liver transplantation: the recipient is a 59 yo man with cirrhosis due to HCV and hepatocellular carcinoma. The liver biopsy pre-reperfusion showed a granulomatous hepatitis with no BARR or fungus and it was suggested sarcoidosis. The liver receptor had a satisfactory postoperative evolution, unless by the elevated liver enzymes and fever since the first day after the liver transplant.

On Jan 31th 2019 the OPO advised that de LCR culture from the donor was positive for M*ycobacterium*. On Feb 01th 2019 the receptor was submitted to liver biopsy: molecular test positive for M*ycobacterium tuberculosis*. TB treatment was initiated with RIPE even with elevated liver enzymes. The treatment is going on with no adverse reactions.

This report demonstrated an acute TB transmitted by a young donor diagnosed with acute meningitidis but with disseminated TB in a retrospective analysis. Further discussion are mandatory to define criteria for acceptance of donors with meningitis/encephalitis in areas with high incidence of TB. We'd like to point out the importance of the rapid OPO communication for the recipient management.

PO306 NEW TECHNIQUE OF PANCREAS TRANSPLANTATION SURGERY - FINE DETAILS FOR GREAT CHANGES

Paweł Skrzypek[1], Paweł Ziemiański[1], Olga Tronina[2], Ewa Nowacka-Cieciura[2], Małgorzata Buksińska-Lisik[3], Maciej Kosieradzki[1], Wojciech Lisik[1]
[1]Department of General and Transplantation Surgery, Medical University of Warsaw, Poland; [2]Department of Transplantation Medicine and Nephrology, Medical University of Warsaw, Poland; [3]3rd Department of Internal Medicine and Cardiology, 2nd Medical Faculty, Medical University of Warsaw, Warsaw, Poland

Background: Early surgical complications are one of the greatest problem of pancreas transplantation all over the world. For years this kind of surgery had noted unsatisfactory level of grafts function and recipients survival. After decades of refinement even small changes could matter of improved results.
Methods/Materials: In our surgery department from January 2016 till 1 February 2019, 26 pancreas transplantation were performed. The twenty of them were carried out simultaneously with kidney transplantation. Donors were strictly selected and belonged to homogeneous group (median p -PASS score = 14, SD = 1.63). Main differences in our standards are rinsing out the pancreas graft with 20% solution of albumins on the back table and performing venous anastomosis to the recipients inferior vena cava, without lengthening the portal vein. Kidney transplantations were performed typically. Precise follow up was performed.
Results: In described group only one pancreas graft was lost due to thrombosis on the eighth day after surgery. The rate of early pancreas graft failure within 90 days is 3.8%. Score even better than described in the UNOS report 2015 (7.8%). In comparison, during 1998–2015 period, early pancreas graft failure rate in Poland was 20.9%. Each remaining recipient was discharged from department with no need for insulin intake. Three months after transplantation procedure median serum c-peptide level was 4.665 ng/ml (SD = 1.303). Hgb A1c median level in the same time was 5.35% (SD = 1.11), similar to the non diabetic population. Each kidney recipient had good graft function after 3 months. Medium serum creatinine level was 1.28 mg/dl (SD = 0.303).
Conclusion: Pancreas transplantation need to acquire well-defined standards of surgery and control points to become safe and wide trusted procedure. Modification of perioperative tactics with the use of 20% solution of albumins,

contributed to a significant improvement in early results of pancreas transplantation.

PO307 UNEXPECTED, BUT USEFUL MODEL - IMPAIRED LIVER CELLS AFTER PANCREATIC ISLET TRANSPLANTATION IN STREPTOZOTOCIN DIABETIC RATS

Jan Kriz[1], Alzbeta Vojtiskova[1], Alzbeta Patikova[1], Lucie Kosinova[1], Eva Sticova[1], Pavel Kulich[2], Monika Cahova[1], Frantisek Saudek[1]
[1]Institut klinické a experimentální medicíny; [2]Veterinary Research Institute

Introduction: Pancreatic islet (PI) transplantation (Tx) is considered a save and promissing therapy for Type-1 diabetes mellitus (DM). Several authors reported a cystic lesions in liver of diabetic rats after Tx of PI. We have detected some liver cystic lesions lined by cholangiocytes in Brown Norway (BN) rats with streptozotocine (STZ) diabetes. The aim of this study is the identification of the main triggering factor causing the development of cystic lesions in liver of our animals. The effects of both STZ and recipient insulin sensitivity were tested.
Methods: Group A (n = 5) - BN rats, healthy, Tx of 450 PI into the liver; Group B (n = 8) - BN rats, alloxan DM, Tx of 450 PI into the liver; Group C (n = 17) - BN rats, STZ DM, Tx of 450 PI into the liver; Group D (n = 8) - BN rats, STZ DM, Tx 1,000 PI into the kidney; Group E (n = 7) - BN rats, STZ DM, human insulin s.c.; Group F (n = 8) - hHTG rats, STZ DM, Tx 1,200 PI into the liver; Monitored 10 months by magnetic resonance imaging; The electron microscopy (TEM) of liver 3 h after injection of STZ.
Results: Suboptimal mass of PI partially corrected glycemia and therefore let PI to be permanently overstimulated to secret insulin. While in animals of groups A, B, F liver lesions were not detected, in animals of groups C and D multiple voluminous cystic complexed have developed within 10 months after Tx. In group E blood glucose levels were nearly normalized by s.c. administered insulin, which administration can be discontinued 6 months after STZ injection. Electron microscopy detected characteristic ultrastructural changes in cholangiocytes 3 h after STZ injection in BN as well as hHTG rats.
Conclusions: The initial impairment of cholangiocytes by STZ was confirmed by TEM and together with overstimulation with rat insulin can cause cystic lesions in insulin sensitive rat strain.
Acknowledgement: Project was supported by grants MHCZ IKEM IN 00023001, Czech Ministry of Health, grant no. 16-28249A and 16-28254A

PO308 MAIN CHANGES AND KEY FINDINGS - TWO DECADES OF POLISH PANCREAS TRANSPLANTATION

Paweł Skrzypek[1], Kaja Śmigielska[2], Paweł Ziemiański[1], Jacek Ziaja[3], Tadeusz Grochowiecki[4], Robert Król[3], Sławomir Nazarewski[4], Maciej Kosieradzki[1], Wojciech Lisik[1]
[1]Department of General and Transplantation Surgery, Medical University of Warsaw, Poland; [2]Department of General, Gastroenterologic and Oncologic Surgery, Medical University of Warsaw, Poland; [3]Department of General, Vascular and Transplantation Surgery, Medical University of Silesia, Poland; [4]Department of General, Vascular and Transplantation Surgery, Medical University of Warsaw, Poland

Background: For years pancreas transplantation has struggled with a large number of surgical complications and a high rate of chronic rejection. Based on the latest scientific reports and taking into account population differences, there is a need to create a national pancreatic transplant registry. Multicenter data analysis seems to be the best way to improve transplantation results.
Methods/Materials: Our data from a national registry and individual centers includes 407 pancreas transplantations (almost always simultaneous pancreas-kidney) performed between 1998 and 2015 in four transplantation centers. Donor information and long-term recipient follow-up were noted.
Results: Post transplant data was available for 406 recipients. Two hundred and sixty-seven of them survived at least one year with satisfactory transplant function. Thirty-eight recipients had died with graft function. A hundred and one lost pancreas graft within first 12 months. Median time of the early graft loss was 20 days. Multivariate analysis shows that grafts from donors older than 40 have significantly inferior survival. In contrast to the literature, we observed a higher risk of pancreas transplantation from donors with BMI > 25 kg/m2, but not BMI > 30 kg/m2. Over 18 years a substantial increase in number of donors resuscitated from cardiac arrest, length of ICU stay and percentage of women was noticed. Significant improvement in 3-months and 1-year survival with no effect on long-term follow-up. Optimal age range of recipients is 21–30.
Conclusion: Insightful and critical analysis of data from the national pancreatic transplant registry should improve the quality of donor selection and recipient matching. There is a need to develop new guidelines in this area, as the p -PASS standard does not allow significant avoidance of complications after transplantation.

PO309 SIMULTANEOUS PANCREAS-KIDNEY TRANSPLANTATION IN A TERTIARY CARE CENTRE IN INDIA

George Kurian, Gauri Shankar, Sandeep Sreedharan, Zachariah Paul, Anil Mathew, Rajesh R. Nair, Rama Chandran
Amrita Institute of Medical Sciences

Introduction: Type 1 Diabetes Mellitus and Diabetic Nephropathy offers a therapeutic challenge. Simultaneous Pancreas-Kidney transplantation (SPK) offers a therapeutic option
Aim: To assess the outcome of eight simultaneous pancreas-kidney transplants conducted at Amrita Institute of Medical Sciences and Research Centre, Kochi, India
Materials and methods: This is a retrospective observational, cross-sectional study, involving analysis of eight simultaneous pancreas-kidney transplants from August 2014 to July 2018, at AIMS, Kochi.
Results: Eight patients underwent SPK transplant over a period of four years. The mean age was 32 years (n = 8; 3 male; 5 female). Only one patient had mild cross match positivity (12%). She was appropriately desensitised. One other patient was induced with Basiliximab whereas all other patients were given ATG 1 mg/kg for 5 days. Seven patients underwent hemodialysis prior to transplant and only one was taken up pre-emptively. They were all started on tacrolimus, mycophenolate and prednisolone. Graft kidney was placed in an extraperitoneal pouch. Three patients had DGF . Two patients required surgical re-exploration due to bleeding complications. Four patients had episodes of acute rejection (two had combined ACR+AMR and two had an AMR). Infections noted were UTI, varicella zoster infection (21 days), varicella zoster retinitis (2 months), tuberculosis (6 months). All patients had normal graft functions at 1 month post transplant. One patient had two episodes of rejection and finally ended up with graft loss by the end of two and a half years. He has now underwent a second renal transplant. Other patients have normal graft function 6 months post transplant.
Conclusions: Simultaneous Pancreas Kidney transplant is the best therapeutic option in patients with ESRD due to Type 1 Diabetes mellitus. The overall results are promising and would provide a better quality of life in these group of patients.

PO310 CURRENT STATE OF RENAL TRANSPLANT PATIENTS IN A SOUTHERN AREA OF ALGERIA

Messaoud Hadj Mahammed, Messaoud Hadj Mahammed
Central hospital of Ghardaia

Background: Renal transplantation (RT) is the best treatment for end stage renal diseases (ESRD). The aim of this study, is to examine the clinical situation of transplant patients in Ghardaia
Methods: In this observational descriptive study, we included all kidney transplant patients for over a year living in Ghardaia. we examined the patients and consulted the medical files
Results: Twenty-two patients included, the average age is 35 (22–53), sex ratio is 0.4, average duration in dialysis was 5 years, two preemptive grafts, all the patients were in hemodialysis.

The kidney donor was, in 36% a siblings, 32% a parent, 22% a spouse, 2 cases of unrelated donor, the average donor age was 42. The average duration of the transplant is 7.5 years

The estimated GFR by CKD EPI is : 68 ml/min/1.73 m^2 (20–102) 68% of patients are hypertensive , dyslipidemia in 23% and overweight in 45% of cases, no case of diabetes.

Infectious complications are frequent: urinary 40%, pneumocystis and brucellosis 13% each, one case of cryptococcal disease.
Surgical complications are rare, 03 cases of ureteral stenosis: Immunosuppressive therapy is: ciclosporin 40%, tacrolimus 45%, two patients on sirolimus and five patients without corticosteroids

A case of PTLD (Kaposi's tumor) in a young patient of 32 years old and a case of breast neoplasia in a 42 years old woman no renal biopsy was performed
Conclusions: Despite the young age of the patients, short duration of transplantation and an adequate immunosuppressive treatment, the function of the graft is weak

The infectious risk to unusual germs is important, it is probably due to rural living and climatic conditions high heat and drought

Non-collaboration between the transplanting centers and local nephrologists, absence of systematic biopsies of the grafts, and the scarcity of performing laboratories, are not insignificant factors

PO311 ORGAN TRANSPLANT ABUSE IN CHINA (1): TRANSPLANTS PERFORMED ON DEMAND DESPITE INSUFFICIENT DONATIONS

Grace Yin[1], David Li[1], Huige Li[2]
[1]China Organ Harvest Research Center; [2]Johannes Gutenberg University Medical Center

Background: Organ transplantation grew abruptly in the People's Republic of China after 2000 despite the lack of a donation system. China announced a complete transition to ethical organ sourcing in 2015. This report assesses the scale and trajectory of China's transplant system, the accuracy of official transplant volume, and the current availability of organs on short notice.
Methods: We analyzed hundreds of transplant hospitals in China regarding bed counts, utilization rates, expansion, revenues, personnel, and funding. These data were examined in conjunction with government and industry statements, regulations, medical journals, archived hospital websites, and media reports. We also ascertained recent developments in organ wait times and transplant volume with data from other investigations.
Results: China's transplant industry began to grow exponentially in 2000 and became factually the largest in the world before a national donation system was first piloted in 2010 and alongside a declining rate of death-row executions. Transplants are characterized by short waiting times routinely quoted in days or weeks, pre-scheduled surgeries, and organs procured from living sources rather than donors meeting brain-death criteria. Based on government-imposed minimum bed count requirements, the 164 approved transplant hospitals would have had a combined capacity of more than 70,000 transplants/year, or over one million since 2000. Many transplant centers had far higher bed counts than the minimums, saw utilization rates above 100%, and underwent significant expansion with new wards, buildings, and campuses. China has announced plans to double the number of approved transplant hospitals by 2020. The latest evidence shows thriving transplant tourism despite official statements to the contrary.
Conclusion: China continues to perform transplants on demand and on a scale far larger than its official total of 15,000 per year, a figure that is surpassed by just a few hospitals.

PO312 ROBOTIC ASSISTED LEFT LATERAL SECTIONECTOMY FOR PEDIATRIC LIVING DONOR LIVER TRANSPLANTATION: DESCRIPTION OF THE TECHNIQUE

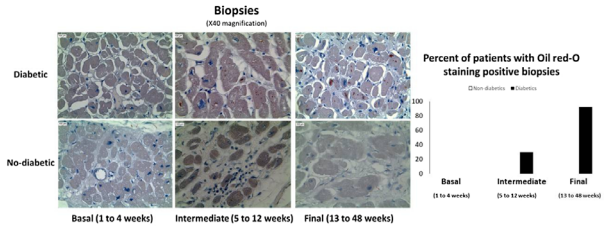
Yasser Elsheikh, Yasir Al Nemary, Dieter Broering
KFSH & RC

Objectives: The adoption of laparoscopic living donor hepatectomy technique in our institution in April 2013 We describe in this video our first robotic left lateral sectionectomy for pediatric LDLT.
Methods: The donor was positioned in a supine split leg position and in 30° reverse Trendelenburg position. A 12 mm trocar was placed in the umbilicus as "assistant port"; four 8 mm trocars were placed on a"semilunaris line" from the right to the left flank with 8 cm distance between each. An Xi da Vinci robotic surgical system was docked. Opening the falciform ligament, the liver hilum was dissected to identify S 2–3 and 4 arteries, the left portal vein and the branches to the caudate lobe. The parenchyma transection was done using the harmonic scalpel. Few hem-o-lock clips were applied. After cutting the hilar plate, the transection was done till the left hepatic vein (LHV). The S2–3 artery stump was secured by two Hem-O-lock clips, the left portal vein and the LHV transected and secured by the 45 mm vascular robotic stapler after preparing a small Pfannestiel incision allowing the positioning of an endobag beside the graft. The donor's procedure lasted 5 h with a, estimated blood loss of 50 ml.
Results: The recipient was an 11 months' boy with a diagnosis of irresectable giant hepatoblastoma. The transplant was uneventful. The donor was successfully discharged at the POD 4. Remarkably low pain score during the first two POD with the VAS evaluation of 5 $\pm$ 3.
Conclusions: Robotic left lateral sectionectomy is the ultimate evolution of minimally invasive donor hepatectomy. with the increased number of procedures its intrinsic value for the surgeon (better ergonomic, stable view, detailed anatomy), the donor (safety and pain) and the quality of the graft (few manipulations) can be better defined in a near future.

PO313 CARDIAC INTRA-MYOCYTES STEATOSIS IN TRANSPLANTED HEART OF TYPE 2 DIABETIC PATIENTS

Cristiano Amarelli[1], Raffaele Marfella[2], Francesco Cacciatore[3], Gemma Salerno[4], Salvatore Esposito[5], Celestino Sardu[2], Gelsomina Mansueto[6], Paolo Golino[4], Ciro Maello[1], Claudio Napoli[2]
[1]Monaldi, Azienda dei Colli; [2]University L.Vanvitelli, Napoli; [3]University "Federico II" Naples; [4]Monaldi Hospital, Cardiology Department, Naples; [5]Aversa Hospital, CE; [6]University of Naples "Federico II"

Background: Pathogenesis of diabetic cardiomyopathy (DCM) is still poorly understood. Diabetes Mellitus (DM) could involve lipotoxic-mediated injury of cardiomyocytes. By using non-diabetic (non-DM) heart transplanted (HTX) in diabetic recipients, we propose an original model to evaluate the cardiovascular effects of diabetic milieu (hyperglycemia and insulin resistance) on the development of lipotoxic effect on cardiomyocytes. Thus, we evaluated cardiomyocyte morpho pathology by the scheduled seriated biopsies and cardiac Echocardiographic parameters of previously non diabetic implanted-hearts in DM recipients.
Methods: We conducted a prospective study (DCM-AHEAD study, NCT03546062) on 88 transplanted patients (36 DM, 52 non-DM). Post-HTX patients were followed by clinical standard evaluation (echocardiography, endomyocardial biopsies, metabolic status and coronary CT angiography). Cardiac samples were evaluated for immunological and pathological signs of rejection, and lipid infiltration with oil red-O staining (Or-O). Cardiac triacylglycerol levels were evaluated by ELISA. Lipotoxic factors, insulin-resistance were evaluated by RT-PCR and double staining immunofluorescence.
Results: A progressive cardiomyocyte lipid accumulation was observed in recipients with diabetes versus non-DM recipients ($p = 0.019$). After one year of follow-up, a significant reduction of left ventricular ejection fraction and TAPSE in diabetic compared to non-diabetic patients is observed ($p < 0.05$) Accordingly, expression of lipotoxic factors was marked in DM versus non-DM recipients. Moreover, these modifications are present in a compensate metabolic status HbA1c 6.7 $\pm$ 1.2 % at baseline versus 6.3 $\pm$ 0.4 after 1 year of follow-up ($p = 0.001$).
Conclusions: Early pathogenesis of human DCM started by metabolic drive leading to cardiomyocyte lipid infiltration. Larger studies should investigate this pathogenic cascade of events and targeted pharmacological treatments.



PO315 ADPKD: A SIGNIFICANT RISK FACTOR FOR TRANSPLANT-RELATED INCISIONAL HERNIAS

Alex Shaw[1], Claudio Sanfilippo[1], Martyn Stott[2], Angela Summers[1], Zia Moinuddin[1], Giuseppe Giuffrida[1], David van Dellen[1]
[1]Manchester Foundation Trust; [2]Health Education North West

Background: Incisional hernias following renal transplantation have a reported incidence varying from 2–15% and may cause considerable morbidity. The anatomical locations of the incision, wound closure technique, patient factors and immunosuppression have been implicated in their development. We aimed to establish the effect of medical co-morbidities burden to hernia development.
Methods: A retrospective analysis of a contemporaneously maintained database from a single transplant unit in the United Kingdom was performed. 1st and 2nd transplants over a 6 year period (2011–2016) were included. All documented incisional hernias requiring surgical intervention were collated (01/2011–12/2018). All patients were operated upon via a Rutherford-Morrison incision and received standard post-operative immunosuppression as per unit protocol. Patient demographics, medical co-morbidities, smoking status and cause of end stage renal failure was collected.
Results: one thousand four hundred fifty-three transplant recipients were included with 54 (3.8%) undergoing subsequent abdominal wall reconstruction (AWR). Risk factors for incisional hernia demonstrated no significant difference between those who did and did not require hernia repair (p =MNS). Patients with Autosomal Dominant Polycystic Kidney Disease (ADPKD) undergoing transplantation had a significantly higher chance of subsequently requiring AWR.

	No incisional hernia	Incisional hernia	*p* value
Total	1,399	54	*N*/A
ADPKD	167/1,233 (11.8%)	16/38 (29.6%)	0.0001
Diabetes	128/1,272 (10%)	6/48 (12.5%)	0.24
Male gender	839 (60%)	31 (57%)	0.21
BMI (<24.9/25–29.9/>30; kg/m^2)	783/321/295	23/15/16	0.1
Smoker	379 (27.1%)	19 (35.2%)	0.19

Conclusions: ADPKD is a significant risk factor for subsequent incisional hernia formation. Disruptions in the collagen pathways associated with APKD may impact on the wound healing mechanisms and conferring this higher risk. In ADPKD patients being listed for renal transplant, counselling regarding incisional hernias should be undertaken. Risk modifiable conditions should also be optimised and technical considerations maximised in this cohort of patients.

PO316 LACK OF RATIONALE FOR TREATING MULTIDRUG RESISTANT GRAM-NEGATIVE BACTERIA COLONIZATION IN A GROUP OF IMMUNOCOMPROMISED PATIENTS

Paweł Skrzypek, Beata Łągiewska, Paweł Ziemiański, Radosław Cylke, Maciej Kosieradzki, Wojciech Lisik, Marek Pacholczyk

Department of General and Transplantation Surgery, Medical University of Warsaw, Poland

Introduction: Multidrug resistant (MDR) rods are a growing problem in numerous surgical units all over the world. It concerns even more immunocompromised patients. β-lactamase resistance can be caused by numerous mechanisms, including extended spectrum ß-lactamase (ESBL) and New Delhi metallo-ß-lactamase-1 (NDM-1). High mortality of infections with these bacteria often results in overreacting in case of asymptomatic colonizations.
Materials & methods: From January 2016 till June 2018 on admission to the Department of Surgery and Transplantation each patient was screened for colonization of GI tract and upper respiratory tract with pathogenic bacteria. In case of indications, other swabs were cultured.
Results: Of 5,806 admissions to the department, 19 patients (0.32%) colonised with ESBL and NDM-1 strains were identified. Eleven of them were immunocompromised because of undergoing transplant surgery or had the transplantation previously. Six from this group were diagnosed on screening at admission: 5 patients were colonized with NDM-1 (+) K. pneumoniae, one with ESBL (+) E.coli and 1 with ESBL (+) Enterobacter cloacae (1 patients were colonized with more than 1 strain of multi-resistant bacteria). Five patients became colonized with NDM-1 (+) or ESBL (+) strains during hospitalization. Length of hospital stay in all 11 patients ranged from 3 to 86 days. None of the patients positive on admission were successfully treated with antibiotics active against ESBL and NDM-1 rods. What is surprising, only one patient became symptomatic. All 11 patients underwent surgery (3 OLTX, 2 KTX, 2 graftectomy, other) and no serious adverse event was seen. Each graft had became satisfactory function during discharging from the unit.
Conclusion: Common practice of administering colistin-based therapy in resistant gram-negative bacilli carriers seems not justified. Our experience confirms, that even in immunocompromised patients, only symptomatic infections should be treated with antibiotics.

PO317 PRELIMINARY RESULTS OF DUAL HYPOTHERMIC EX VIVO LIVER PERFUSION PRIOR TO LIVER TRANSPLANTATION IMPLEMENTED IN THE CLINICAL ROUTINE

Dagmar Kollmann, Michael Hofman, Omar Krdzalic, Franziskus Horodynski, Gerd Silberhumer, Georg Gyoeri, Andreas Salat, Thomas Soliman, Gabriela Berlakovich

Medical University of Vienna, Department of Surgery, Division of Transplantation

Background: *Ex vivo* organ perfusion is a rapidly evolving field and this alternative method of preservation has already been implemented by several centers. There is increasing evidence that dual hypothermic *ex vivo* liver perfusion (DHOPE) can reduce biliary complications after liver transplantation (LT). We therefore implemented DHOPE in our clinical routine and herein summarize our first experience.
Methods: DHOPE was initiated at the Medical University of Vienna in May 2018 using the Liver Assist Device from Organ Assist. Patients > 18 years old with end-stage liver disease obtaining LT received a perfused liver graft from donation after brain death donors if logistically feasible. During perfusion, the hepatic artery and the portal vein were perfused with oxygenated Belzer perfusion solution at a temperature of 11–15°C.
Results: Between 05/2018 and 02/2019, DHOPE of liver grafts was intended for 27 patients. In 3 cases, the machine had to be stopped because of technical issues and the livers were put on ice and transplanted without perfusion. The remaining 24 patients received LT with livers perfused for a median time of 150 min (range 60–330 min). Median peak AST levels after LT reached 1,205 U/L (257–8280) and dropped after 14 days to 34 U/L (13–199). 1-year patient survival was 90.2%. Two patients died after LT, the first one recovered well but developed multi organ failure due to sepsis one month after LT, the second one was lost intraoperatively due to extensive bleeding, independent of the *ex vivo* perfusion. 3/24 patients (12.5%) developed biliary complications requiring Roux-en-Y reconstruction - 2 patients with early biliary leak and 1 patient with bile duct necrosis after 3 months.
Conclusion: Our experience shows that DHOPE is the preferred method to start an *ex vivo* perfusion program, as there is no risk for warm ischemia in case of technical problems with the machine. Furthermore, the biliary complication rate was within international benchmarks.

PO318 IMPACT OF INADEQUATE INITIAL ANTIMICROBIAL THERAPY OF ACUTE GRAFT PYELONEPHRITIS ON FUNCTION OF TRANSPLANTED KIDNEYS

Martin Kacer, Lukas Kielberger, Lenka Benešová, Tomas Reischig

University Hospital in Pilsen, Charles University in Prague

Backround: Acute graft pyelonephritis (AGPN) is frequent and potentially serious complication in kidney transplant recipients (KTxR). The cornerstone of successful APGN management is appropriately chosen antimicrobial therapy (AT).
Methods: A retrospective study included all patient who had underwent kidney transplant in 2000–2015 time period at University Hospital in Pilsen and were subsequently hospitalized for AGPN. The aim of the study was to assess the impact of adequate versus inadequate initial antimicrobial therapy of APGN on the function of the transplanted kidney at 3 months after AGPN episode.
Results: A total of 224 APGN episodes were analyzed in 101 KTxR. 9.4% of the APGN episodes were treated with inadequate antimicrobial therapy (IAT); median (IQR) delay to adequate antimicrobial therapy initiation was 3 (3) days. IAT was proved to be a strong predictor of impaired kidney graft function at 3 months, both in univariate and multivariate risk analysis (F [6.262] = 10.279, $p = 0.0008$). Furthermore, every day of delay to adequate antimicrobial therapy initiation was associated with a rise in serum creatinine of 18.7 ± 5 μmol/l (mean ± SD).
Conclusion: We have demonstrated harmful effect of inadequate initial antimicrobial therapy of APGN on the function of the transplanted kidney. Findings underline the importance of early effective antimicrobial therapy.

PO319 IMMUNOSUPPRESSION MINIMIZATION IN LIVER TRANSPLANT RECIPIENTS

Krzysztof Mucha[1], Bartosz Foroncewicz[1], Jan Lerut[2], Barbara Moszczuk[1], Michał Florczak[1], Agnieszka Perkowska[3], Natalia Krata[1], Radosław Zagożdżon[4], Arkadiusz Urbanowicz[1], Emilia Knioła[1], Krzysztof Zieniewicz[5], Leszek Pączek[1]

[1]Department of Immunology, Transplantology and Internal Medicine, Medical University of Warsaw; [2]Cliniques Universitaires Saint-Luc, Institut de Recherche Expérimentale et Clinique, Université catholique de Louvain; [3]Department of Transplantation Medicine, Nephrology, Internal Diseases, Medical University of Warsaw; [4]Department of Clinical Immunology, Transplantation Institute, Medical University of Warsaw; [5]Department of General, Transplant and Liver Surgery, Medical University of Warsaw

Introduction and aim: Long-term immunosuppression (IS) increases the risk for cardiovascular diseases, malignancies and infections, the most important comorbidities liver transplant recipients (LTRs). The transplanted liver is rejected less frequently than other transplanted organs. Therefore, IS minimization (ISmin) in LTRs is feasible. We implement IS tapering protocol based on clinical, laboratory and histopathology factors aimed to reduce comorbidities burden and to establish predicting factors of favorable outcomes.
Materials and methods: Out of 890 LTRs, first 212 LTRs were screened to exclude LTR with primary autoimmune diseases or unstable graft function and 92 patients were enrolled. They were > 5 years post LT with IS consisted of 3, 2 or 1 drug. Drug doses were reduced in 3-months intervals and liver function tests (LFTs) were controlled 2, 4 and 8 weeks after each reduction. After infratherapeutic monotherapy doses were achieved immune tests, liver biopsy and imaging were done to qualify for further reduction.
Results: Clinical indications to ISmininclude: hypertension (69.6%), diabetes mellitus (27.2%), chronic kidney diseases (25%), cardiovascular diseases (23.9%) and history of malignancy (9.8%). During first 12 months, 28 out of 92 LTR reached infratheraputic level of monotherapy and were followed. Anti-HLA antibodies were found in 28 LTR: DSA - in 5 (17.9%), anti HLA with possible cross reactivity with donor HLA in 11 patients (39.3%), whereas in 12 LTR anti HLA were non-related to donor HLA (42.9%). No acute rejection (RAI > 3 points) was found in these 28 subjects. In 3 out of 92 patients LFT's got elevated during ISmin and normalized after return to previous IS.
Conclusions: LTR patients with non-immunological cause of native liver failure, who are at risk of IS related comorbidities, should be considered to

reduce IS. Proposed algorithm for ISmin seems both safe and effective. The study recruitment and follow-up are ongoing.

PO321 LIGHT CHAIN DEPOSITION DISEASE AFTER KIDNEY TRANSPLANTATION-A CASE REPORT AND LITERATURE REVIEW

Yaser Shah, Tariq Ali, Nada Alamri
King Faisal Specialist Hospital and Research Center, Riyadh

Light Chain Deposition Disease (LCDD) is a monoclonal immunoglobulin deposition disease. This commonly affects kidneys leading to end-stage renal disease. It has a high disease recurrence rate after kidney transplantation and the graft survival after recurrence is poor despite treatment. There is limited literature available on denovo occurence of LCDD after kidney transplantation. To prove if such patients had monoclonal gammopathy before kidney transplantation is difficult if kidney biopsy and serum free light chains are not done.

This case underlines the importance of accurate diagnosis of end stage renal disease before kidney transplantation as some suggests avoiding kidney transplant in patients with LCDD. Light chains burden can be reduced with the current available treatment before proceeding for kidney transplantation, which may lower the chances of recurrence. Once undiagnosed cases are recurred after kidney transplantation, its diagnosis could be delayed because of challenges involved in LCDD diagnosis, leading to late start of Dexamethasone and Bortezomib treatment with poor outcomes.

A 43 years old lady was diagnosed with microscopic hematuria and proteinuria during her 4th pregnancy complicated with pre-eclmpasia during this and 5th pregnancy. She had never been offered a kidney biopsy and she eventually developed end-stage renal failure. She underwent living donor kidney transplant in November 2016, received alemtuzumab induction and maintained on prednisone, tacrolimus and myocphenolate mofetil. 14 months later she was treated for BANFF 2A rejection with thymoglobulin with complete recovery. 1 month later she presented again with rising serum creatinine and proteinuria of 10 grams/day. Biopsy showed features of LCDD. Serum light chains showed marked elevation of κ -light chains, however, bone marraow biopsy was unremarkable. She was treated with 4 cycles of dexamethaosne, bortezomib and cyclophosphamide with poor graft outcome.

PO322 LAPAROSCOPIC LIVE DONOR NEPHRECTOMY: A GREEK PERSPECTIVE

Spyridon Vernadakis[1], Stamatis Orfanos[1], Panagiotis Sakarellos[1], Christos Nikolaidis[1], Maria Darema[2], Christina Melexopoulou[2], Georgia Fotopoulou[3], Despina Danasi[3], Polla Stratigopoulou[3], John Boletis[2], John Bokos[1]
[1]Department of Transplantation Surgery, LAIKO General Hospital, Athens, Greece; [2]Nephrology Department and Transplantation Unit, LAIKO General Hospital, Athens; [3]Anesthesiology Department, LAIKO General Hospital, Athens

Background: Laparoscopic live donor nephrectomy (LLDN) has become the standard procedure for renal transplantation. The technique is considered less invasive for the donor, allowing lower postoperative analgesic requirements and a faster return to daily activities. The aim of this study was a retrospective assessment of the safety of LLDN and the short term outcome of these renal transplantations.
Methods: Between November 2018 and February 2019, we performed 15 LLDN (14 left and 1 right nephrectomy). All laparoscopic procedures were performed by the same team consisting of an expert laparoscopic and transplant surgeon and his assistants. The donor mean age was 54.2 years (range 34 to 69), 11 of the donors were women (73.33%) and 4 were men (26.67%), while their mean Body Mass Index was 29Kg/m2.
Results: LLDN was successfully completed in all patients, without conversion to open surgery. Mean operative time was 191.67 min (range 160–270) with an average blood loss of 20 ml. Ten of them (66.67%) had previous abdominal operations. The mean warm ischemic time was 12.4 min (range 4–30). The donor´s mean hospital stay was 3, 4 days (range 3–4) and their mean serum creatinine at discharge was 1.14 mg/dl. There were no major donor complications. One patient presented with a wound seroma and another with postoperative urinary retension, both responding to conservative treatment. No donor required readmission. Kidneys were transplanted successfully, while 6 cases were ABO-incompatible transplantations and the mean recipient creatinine on discharge was 1.02 mg/dl. Acute tubular necrosis was seen in 2 patients, one of them required dialysis. In one case an Antibody Mediated Rejection (ABMR) was proven in biopsy responding on conservative treatment. Kidney function recovered thereafter in all 3 cases.
Conclusions: LLDN was confirmed to be safe and effective, with no negative impact on transplants success. The vascular stapler is useful to manage

PO323 HAND HYGIENE AMONG DOCTORS IN TRANSPLANT DEPARTMENTS IN POLAND

Olga Rostkowska, Magdalena Durlik
Department of Transplantation Medicine, Nephrology and Internal Diseases, Medical University of Warsaw

Background: Hand hygiene in transplantology is a topic often underdiscussed whereas it's hard to overestimate its impact in preventing hospital acquired infections (HAIs). With antimicrobial resistance on the rise and challenges with developing new antibacterial therapies, prevention of HAIs must become the cornerstone of our daily practice.
Methods/Materials: Based on the WHO recommendations "Your 5 Moments for Hand Hygiene", we asked medical doctors working in transplant departments in Poland how often they disinfect their hands in the following situations: before touching a patient (1), before an aseptic procedure (2), after body fluid exposure (3), after touching a patient (4), after contact with patient surroundings (5). The survey was anonymous and was conducted from January till March 2019 as part of an on-line questionnaire. The project received the approval of the Bioethical Commission of the Medical University of Warsaw.
Results: We received responses from 100 doctors–59 females and 41 males. In the examined group, two critical moments for hand hygiene were (1) and (5): doctors who declared disinfecting their hands 'always or almost always' in those situations comprised 76% and 65% of the sample, respectively. In the situation (4), the number was 95%. In circumstances (2) and (3), the scores for the same frequency of hand hygiene very high, namely 98% and 100%. The rest of respondents declared that in the above-mentioned situations they disinfect hands less frequently, i.e. in less than 75% of such cases. The most common reasons for the lack of proper hand hygiene were rush/lack of time (I) or the lack of a functional and filled alcohol hand-rub container (II).
Conclusion : The topic is worth emphasising on different occasions as many medical doctors admitted that better education, reminders and developing the right habits are foundations of correct hand hygiene patterns. The survey proved to have an educational value.

PO324 LIVER RETRANSPLANTATION: A SINGLE CENTER EXPERIENCE

Mariana Mihaila, Vladislav Brasoveanu, Gabriela Smira, Irinel Popescu
Fundeni Clinical Institute

Retransplantation is the only form of treatment for patients with irreversible graft failure. The aim of our study was to assess a single centre's experience of the indications for retransplantation.
Methods: A total of 916 patients were transplanted between 2000 and 2018. The following parameters were analysed: patient demographics; primary diagnosis; distribution of retransplantation over different time periods; indications for retransplantation; time interval to retransplantation, and overall patient and graft survival.
Results: Of the 916 primary orthotopic liver transplantations, 39 patients required retransplantation. The indications for retransplantation were: primary non-function (21%), hyperacute rejection (2.6%), hepatic artery thrombosis (42.1%), portal vein thrombosis (2.6%), small-for-size syndrome (5.2%), HCV recurrence (13.15%), HBV - acute liver failure (2.6%), chronic rejection (7.8%), primary cholangiosclerosis recurrence (2.6%). Half of the retransplantation were performed within first month of the primary transplantation. Patient survival at 1 year was 42.1%, and at 3 years it was 34.21 %.
Conclusions: Liver retransplantation is a complex procedure requiring great technical skill and appropriate patient selection. Retransplanedt patients had significantly longer hospital and intensive care unit stays than those receiving only one transplant.

PO325 TREATMENT OF SEVERE ANTIBODY MEDIATED KIDNEY ALLOGRAFT REJECTION WITH ECULIZUMAB AND RITUXIMAB COMBINATION; REPORT OF THREE CASES

Çağlar Borçak Ruhi
Acibadem University

Introduction: Antibody mediated rejection (AMR) due to preformed or denovo donor specific antibodies (DSA) is one of the most catastrophic situation in kidney transplantation (KTx). Herein, outcomes of three patients presented who had resistant AMR and, treated with Eculizumab and Rituximab combination.

Case 1; A 51-year-old woman in kidney waiting list for 11 years, pretransplant PRA Class I 82%, and Class II 67%, DSA towards the HLA B*35 (1,500 MFI), CDC and Flow cytometric cross match (FCXM) were negative. Cadaveric KTx was performed after plasmapheresis (TPE) with IVIG (0.4gr/kg) administration and ATG/Steroid induction. Although TPE/IVIG was continued, biopsy proven AMR (accompaying severe cortical necrosis) occured with DSA HLA B*35 (elevated to 7,200 MFI).

Case 2; 36-year-old women, preemptive KTx from her husband. Her CDC, FCXM, Luminex single antigen were all negative. Induction was ATG/Steroid, at fourth day biopsy proven C4d+ AMR occured with denovo Clas I DSA 6,700 MFI and B cell FCXM became positive.

Case 3; 45-year-old women, had dialysis for eight years, KTx performed from her husband. CDC and FCXM negative for T-cell, 14% positive for B-cell in FCXM, PRA Class I 40%, Luminex single antigen DSA B*51 positive (1,183 MFI). Preoperative four session TPE+IVIG was performed, induction was ATG/Steroid. She had biopsy proven C4d+ AMR at seventh day.

Result : All of the patients were on TPE/IVIG treatment at the diagnosis of AMR. The addition of the Eculizumab (900 mg 2–4 times weekly) and Rituximab 375 mg/m^2 (single dose) combination to TPE/IVIG succesfully treat the ongoing AMR. The patients kidney fuctions were gradually improved, the need of dialysis disappeared and DSA supressed in Case 1 and 3.

Conclusion: Severe AMR could be treated successfully by targeting multiple pathologic mechanisms such as removal of the preformed DSA with plasmapheresis, suppression of the ongoing antibody production with Rituximab, and blocking complement dependent allograft injury with Eculizumab.

PO326 THE RESULTS OF PILOT STUDY OF THE MESENCHYMAL STEM CELLS LOCAL THERAPY EFFICIENCY FOR INDUCTION OF IMMUNOSUPPRESSION IN THE EARLY POSTOPERATIVE PERIOD AFTER KIDNEY TRANSPLANTATION

Sergey Korotkov, Alexandr Nosik, Eugeniya Primakova, Ekaterina Petrovskaya, Denis Efimov, Ivan Shturich, Yuliya Yuneva, Margarita Dmitrieva, Aleksei Shcherba, Oleg Kalachik, Svetlana Krivenko, Oleg Rummo

Minsk Center for Surgery, Transplantology and Hematology

Aim: Was to evaluate the efficiency of the adipose tissue mesenchymal stem cells (MSC) local therapy (LT) for induction of immunosuppressive therapy (IIT) in patients after kidney transplantation (KT) in the early postoperative period.

Methods: This is a report of pilot, prospective, single center, open label, randomized study of the superiority MSC induction of immunosupression over standard IIT in regard of immunological dysfunction development and kidney transplant function improvement. Inclusion criteria: adult kidney transplant recipients who received first kidney transplant. Exclusion criteria were high immunological risks at the time of surgery (HLA mismatching, PRA > 0%). In the first group MSCs introduction was performed through the renal transplant artery during the reperfusion in total dose of 2 million cells. In the second group patients received standard immunosuression. IIT in both groups was the basiximab 20 mg on 0 and 4 days after transplantation. Maintenance therapy includes calcineurine inhibitor, mycophenolic acid, steroids. The protocol kidney transplant biopsies were performed on the 7th day.

Results: of our research showed that the frequency of graft dysfunction which were associated with rejection, was less in the 1st group – 20% versus 40% in the 2nd group. At the same time, level of serum creatinin decreased more intensively in 1st group (MSC LT) and was assessed as 244 ± 117 μmol/l at the 7 day after operation. In the 2nd group it was respectively 303 ± 194 μmol/l (p>0.05). Dynamics of GRF level restoration didn't differ in groups and reached 32.14 ± 11.14 ml/min, 35.1 ± 13.1 ml/min respectively on 7 day after transplantation. We didn't observed any significant difference in frequency and strength of side effects in study groups.

Conclusion: Local infusion through the renal transplant artery of allogeneic adipose tissue MSC as induction immunosupressive therapy in kidney transplantation is effective and safely.

PO327 CIRCULATING PASSENGER DONOR T AND NK CELLS IN LUNG TRANSPLANTATION RECIPIENTS ARE DERIVED FROM THE DONOR LUNG PARENCHYMA AND REPRESENT TISSUE-RESIDENT MEMORY CELLS

Christine Falk[1], Bettina Wiegmann[2], Ramon Bellmas Sanz[3], Kim Bläsing[3], Fabio Ius[2], Ann-Kathrin Knöfel[2], Igor Tudorache[2], Danny Jonigk[4], Murat Avsar[2], Axel Haverich[2], Gregor Warnecke[2]

[1]Hannover Medical School; [2]Cardiothoracic and Transplantation Surgery, Hannover Medical School; [3]Institute of Transplant Immunology, Hannover Medical School; [4]Institue of Transplant Immunology

Purpose: After lung transplantation, donor T and NK cells were detected in recipient blood immediately after Tx, persisting at least 3 weeks and characterized by the tissue retention marker CD69. In order to determine their origin, we hypothesized that donor T and NK cells have a peculiar tissue-resident memory phenotype that represents a unique subset of resident cells in the lung.

Methods : Donor cells in recipient blood were determined in 27 lung transplant patients at T0, T24, 3 wk by staining of donor HLA molecules plus lineage- and tissue-specific markers using FACS. The phenotype of T and NK cells in perfusates (n = 30), donor trachea (n = 9), lymph nodes (n = 15) and recipient explanted parenchyma (n = 19) was compared to circulating cells.

Results: In blood of all lung transplant recipients, donor derived T and NK cells were detected at T0, T24 and 3 weeks, showed higher CD69 expression compared to recipient cells (p = 0.001 to 0.03) and were mostly CD25-. This phenotype was similar to T and NK cells in perfusates, with significantly increased CD69 without CD25 expression compared to PBMCs (all $p < 0.005$). NK cells from donor perfusate and tracheas were CD56dim CD16 + , in contrast to lung-draining lymph nodes with highly enriched CD56 + +CD16- NK cells. T cells from trachea and lymph nodes showed also high CD69 expression and significant enrichment of effector memory (CCR7- CD45RO+) T cells (all $p < 0.03$). In donor trachea and recipient parenchyma, CD69 + T cells showed co-expression of other tissue residency markers such as CD103, CD49a and PD-1. These were not found in perfusates, highlighting differences between these compartments.

Conclusion: Our results suggest that donor T and NK cells found in the periphery of lung transplant recipients are derived from lung parenchyma and represent a subset tissue-resident memory cells. This transient chimerism in recipient blood may have clinically relevant implications for the induction of tolerance after transplantation.

PO328 EXPERIENCE IN TWO LONDON CENTRES OF NEPHRECTOMY IN ADULT POLYCYSTIC KIDNEY DISEASE PERI TRANSPLANTATION

Stephanie Chong[1], Oshani Dissanayake[1], Cinzia Sammartino[2], Rajesh Sivaprakasam[2], Gareth Jones[1], Raymond Fernando[3], Ismail Mohamed[2]

[1]Royal Free London NHS Foundation Trust; [2]Royal London Hospital, Barts health NHS trust; [3]Anthony Nolan Laboratories

Background: There is no consensus in the management of patients with symptomatic polycystic kidneys in adult polycystic kidney disease (ADPKD). We examined practice and outcomes in 2 different renal transplant centres, Royal London Hospital (RLH) and Royal Free Hospital (RFH).

Methods: All patients who underwent a nephrectomy procedure for ADPKD between January 2013 and August 2018 were reviewed for medical and surgical complications, use of blood transfusion, timing to transplantation and sensitisation.

Results: Thirty-nine patients underwent 45 nephrectomy operations, with mean age of 54 years, male/female distribution (24/16) and mean BMI of 31. 17 of 18 patients in RLH had a bilateral nephrectomy; 25 of 27 patients in RFH had a unilateral nephrectomy. Of these, 6 proceeded to contralateral nephrectomy (pain, infection and malignancy). 5 patients were diabetic and 11 were pre-renal replacement therapy. Mean length of surgery was 210 min. Indications were haematuria (20%), pain (40%), space (38%), malignancy (11%) and infection (49%). There was no 30-day mortality; 4 patients in the series died at 6, 17, 22 and 30 months. All were unrelated to the nephrectomy episode except one which was due to multiple complications. 20% developed post-operative complications (collections, infection and thromboembolic disease)- 3 underwent reexploration and 4 had an interventional radiology guided drainage. 40% developed post-operative infections managed with antibiotics. 40% nephrectomy cases required blood transfusion perioperatively (mean 2 units). 14 patients were subsequently transplanted during this period;1 developed weak class II DSA antibodies with MFI < 2,000 following the nephrectomy, and 1 developed cellular rejection at day 3; both patients did not receive any blood transfusion. In this period, 14 other patients were transplanted pre-nephrectomy. None had new DSAs or rejection.

Discussion: Both approaches are associated with minimal transfusion without evidence of sensitisation.

PO329 IMPACT OF KIDNEY WEIGHT AND RECIPIENT SIZE MATCHING ON FIRST YEAR KIDNEY TRANSPLANTATION (KT) OUTCOME: PRELIMINARY REPORT OF A PROSPECTIVE STUDY

Giuseppe Iaria, Federica Corrado, Filomena Sergi, Lorenzo Petagna, Sara Telli, Silvio Marzio, Francesca Blasi, Claudia Quaranta, Marco Pellicciaro, Giuseppe Vita, Daniele Sforza, Giuseppe Tisone

Transplant Surgery Tor Vergata University, Roma

Background: Aim of the study was to evaluate the impact of the kidney weight and the kidney/recipient size matching on the graft outcome.

Methods/Materials: Senety-five patients (Male = 57) underwent KT from September 2017 to January 2019. Mean recipients age was 55 years (SD ± 12.3). Mean donors age was 55.8 years (SD ± 13.7), male = 45, female = 30.

Mean follow up was 6 month (SD ± 4.3). 42 transplantation were performed with non-ECD organs (mean donor age 46.9 years), 36 with ECD-organs (mean donor age 66.2 years). There were 2 graft loss due to arterial trombosis.

For each transplantation the kidney weight was measured according to a standard protocol after backtable procedure. We defined the outcome as graft-function expressed as creatine blood level at 1, 3, 6, 9, 12 month and as incidence of Delayed Graft Function (DGF). We defined kidney recipient size

matching as a kidney grams/recipient Body Surface Area (BSA) defined whith Mosteller formula.

Statistical analysis was performed by SPSS using Person correlation and Anova test.

Results: Mean kidney graft weight was 244.9 mg, SD ± 66.4.

Delay graft function (as the need of dialisys after KT) was observed in 32 patients (42.6%).

Patients who experienced DGF had significant higher body weight (77.9 vs. 71.3 kg, $p = 0.046$), higher BMI (26.6 vs. 23.8, $p = 0.002$) and furthermore higher donor weight (82.3 vs. 74.9 kg, $p = 0.014$) and higher kidney graft weight (261 vs. 231 mg, $p = 0.053$).

Kidney grams/recipient BSA correlated in inverse proportion with the recipients serum creatinine at 6 months ($p = 0.05$) and 9 month ($p = 0.04$): heavy kidneys have better serum creatinine when transplanted in patients with low BSA.

Conclusion: The preliminary report shows that both recipient and donor weight as well as kidney graft weight adversely influence incidence of DGF.

Moreover Kidney grams/recipient BSA correlates in inverse proportion with 6 and 9 months serum creatinine.

PO330 DONOR AGE AND EARLY UTIS AFFECT ONE-YEAR RENAL TRANSPLANT FUNCTION

Karola Warzyszyńska[1], Michał Zawistowski[1], Edyta Karpeta[2], Natalia Dziewa[1], Maciej Kosieradzki[1]

[1]Department of General and Transplant Surgery, Infant Jesus Teaching Hospital, Warsaw; [2]Department of Surgical and Transplantation Nursing and Extracorporeal Therapies of Warsaw, Medical University of Warsaw

Background: Urinary tract infection (UTI) occurs in 25% of kidney recipients within one year from transplantation and is associated with impaired graft function. One of the factors that affect UTI occurrence is ureteral stent placement (double-J or pigtail).

The aim of this study was to assess if there is any correlation between stent placement, UTI incidence and graft function.

Methods/Patients: We conducted an observational study in 753 patients transplanted between 2010 and 2017. Inclusion criteria were: preserved graft function and no need for dialysis at one year of follow-up.

Medical records were searched for intraoperative double-J placement, UTI incidence and eGFR on 30th and 360th day post-transplant.

Hypothetical eGFR of donor grafts was estimated, considering donors' age and physiological age-dependent loss of functional nephrons in healthy population. Hypothetical GFR was also compared with donor and recipients eGFRs calculated from MDRD.

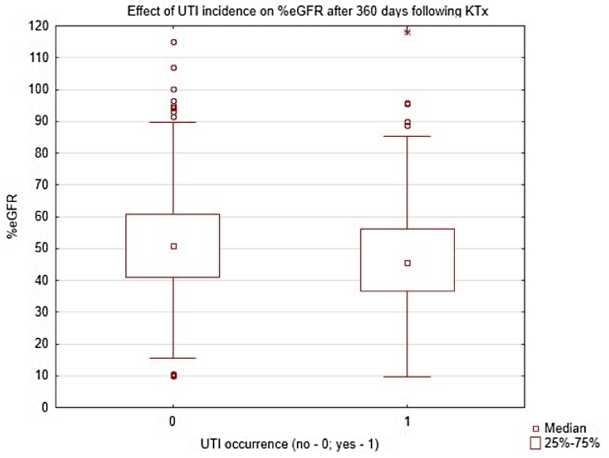
Spearman's correlation, student *t*-test and chi-square were applied when appropriate. *p*-value < 0.05 was considered statistically significant.

Results: UTI occurred in 239 (31.8%) patients. On 30th day after transplantation (KTx), eGFR was significantly lower in UTI group (median 39.5 vs. 43.2; $p < 0.01$). Similar pattern was seen one year after transplantation (figure).

Double-J stent was placed at surgeon's discretion in 213 (28.3%) patients . UTIs occurred in 92 (43.2%) of stented vs. 147 (27.2%) in non-stented group ($p < 0.01$; OR:2; 95%CI, 1.5–2.8).

Median hypothetical donor eGFR was 105.8 ml/min, while calculated from MDRD 64.2 ml/min. Strong correlation of age-adjusted hypothetical eGFR with one year transplant function ($R = 0.45$) was noted.

Conclusions: UTI in early post-transplant period decreased eGFR by 4–5 ml/min/1.73 m2. UTI was twice more likely, when urinary stent was placed.



PO331 THE EFFECT OF IMMUNOSUPPRESSION ON ANTIGEN-SPECIFIC IMMUNOGLOBULIN LEVELS IN KIDNEY TRANSPLANT RECIPIENTS

Stephanie Chong, Rhys Evans, Ciara Magee, Mark Harber

Royal Free London NHS Foundation Trust

Introduction: Kidney transplant recipients (KTRs) are at increased risk of infection, but the effect of immunosuppression (IS) on antigen-specific humoral immunity post-transplant is unknown. We investigated how IS affects Diphtheria IgG (DIgG), Tetanus IgG (TIgG), Varicella zoster IgG (VZVIgG) and Pneumococcal specific IgG and IgM (PnIgG/PnIgM) levels after kidney transplantation.

Methods: We examined serum antibody levels in 93 KTRs using a quantitative ELISA (www.bindingsite.com) at the time of transplant, and at 12 weeks thereafter; 25 patients had antibody levels measured again at 48 weeks. We compared antibody titres between patients who had standard unit IS (Basiliximab induction, pulsed methylprednisolone and rapid prednisolone taper to zero; maintenance tacrolimus and MMF) without augmentation, those who had increased IS exposure due to early rejection episodes, and those who had further IS reduction due to CMV disease.

Results: Patients were aged 45.7 ± 32 years; 64.5% were male. 11 (11.8%) patients had rejection within 12 weeks with increased IS; 30 (32%) patients had IS reduction due to CMV disease. There was a reduction in DIgG (base 0.189 mg/l [0.06–0.38]; 12 weeks 0.128 mg/l [0.03–0.28]; $p = <0.0001$) and PnIgM levels (base 138.9 mg/l [76.5–272]; 12 weeks 115.2 mg/l [64.3–272]; $p = 0.02$), with 14 patients falling below the protective DIgG level of 0.01 mg/L. A similar trend was seen with TIgG and PnIgG, and also a trend toward further DIgG reduction at 48 weeks in the group with increased IS, compared to an increase in antibody levels in the group with reduced IS. VZVIgG levels remained consistently high amongst each group and time point.

Conclusion: In KTRs, PnIgM and DIgG levels fell 3 months post-transplant compared to baseline. There may be further decline in antigen-specific immunoglobulin levels in KTRs with IS augmentation due to early rejection. DIgG may be a useful biomarker for impaired immunity and a guide to revaccination.

PO332 PRESERVATION FLUID (PF) CULTURES: CLINICAL IMPACT IN LIVER TRANSPLANTATION (LT)

Alvaro Alcaraz, Enzo Giordano, Santiago Reimondez, Rafael Pereyra Ferrero, Luz Chamorro, Martin Maraschio

Hospital Privado Universitario de Cordoba

Bacterial infections are frequent in LT recipients. Positive PF cultures role in these infections has not yet been widely studied. We described the incidence and ethiology of germs developed in PF cultures in our series and evaluate its impact on postoperative recipient infections, total hospital stay and patient survival.

A non randomized, prospective and consecutive study in deceased donor LT recipients was carried out from January 2014 to December 2017. Back table PF cultures were analized. We considered a positive PF to the development of any germs in the samples and negative PF to no signs of growth after 5 days. They were classified as contamination or pathogens acording to microbiology protocols. Targeted Antibiothic therapy was suministered in the last ones. Recipients were divided in two groups: PF(−) and PF(+). Recipients Infections related to positive PF were analyzed in a postoperative 30 day period . These were identified as "direct correlation" when the same germ grew up in PF. Hospital stay and 30 day, 1, 3 and 5 year patient survival was compared between groups

Eighty-eight Recipients were included in the study period. 37.5%(33) PF had positive cultures. 28 (92.4%) were considered contamination and only 5 as pathogens. We found no differences in postoperative infections between groups (p 0.840) and no direct correlation was found. There was no significantly differences in ICU and total hospital stay between groups (p 0.374 and 0.427) and they have similar 30 day, 1, 3 and 5 year patient survival (p 0.480)

Postoperative infections, hospital stay and recipient survival seems not to be influenced by PF cultures positivity although this has high prevalence. The authors consider that treatment of isolated pathogens could have prevented infections, therefore, those groups that perform PF cultures should consider treatment in these cases and conclude prophylaxis when PF is negative or contamined.

PO333 TACROLIMUS ASSOCIATED TROMBOTIC THROMBOCYTOPENIC PURPURA (TTP): A RARE ENTITY AFTER ORTHOTOPIC LIVER TRANSPLANTATION

Nikolaos Garmpis, Christos Damaskos, Eleni Variami, Paraskevi Kotsi, Efstathios Antoniou
Laiko General Hospital, National and Kapodistrian University of Athens, Medical School

In 1990, Starzl et al. reported successful use of tacrolimus in patients undergoing liver transplantation and who had rejection despite receiving conventional immunosuppressive treatment. Although efficient, tacrolimus is known to cause numbered side effects. Thrombotic thrombocytopenic purpura (TTP) is a rare, but well described complication in organ transplant patients receiving immunosuppressant drugs, such as tacrolimus. TTP is commonly associated with neurological manifestations.

The aim of this study is to present a rare clinical entity of TTP post orthotopic liver transplantation (OLT) via a clinical case of a 48-year-old female patient. This patient undergone a deceased OLT due to chronic HBV/HDV infection. She was successfully re-operated on the second postoperative day due to bleeding from a tiny diaphragmatic artery. During the first 18 post-operative days, her general condition had been improved. She then presented with seizures and headaches, having difficulty to be explained. FBC showed progressive lowering of platelets and liver U/S few ischaemic areas. On the 20th postoperative day she presented bilateral cortical blindness. Eyes examination was normal and she underwent a brain CT scan, which confirmed PRES syndrome. Microscopic peripheral blood examination followed, showing the existence of numerous schistocytes, leading to the final diagnosis of TTP. She immediately commenced plasmapheresis and after three sessions, higher dose of cortisone administration and conversion from tacrolimus to everolimus, her peripheral blood smear was free of schistocytes and the patient's vision was restored. Two weeks after this incident, a second brain CT scan was performed which showed recession of the neurological findings and a liver U/S showed improving of the ischaemic areas.

Even though PRES syndrome caused by TTP is a rare and life threating entity, it can be fully reversible with the aforementioned treatment, when this starts as soon as possible.

PO334 LIVER TRANSPLANTION FOR HEPATOCELULAR CARCINOMA: OUTCOMES WITHIN MILAN VERSUS BEYOND MILAN IN A SINGLE CENTER IN MEDELLIN-COLOMBIA

Jaime Ramirez[1], Luis Toro[2], Luis Barrera[2], Andres Becerra[2], Elizabeth Correa[2], Luisa Calle[2], Hamilton Ceballos[2], Jorge Gutierrez[2]
[1]Hospital Sanvicente Fundación; [2]Hospital Sanvicente Fundacion

Introduction: Hepatocellular carcinoma is the most frequent primary liver cancer and is an important medical problem. With 782 000 cases diagnosed and 746 000 deaths in 2012, and an age-adjusted worldwide incidence of 10•1 cases per 100 000 person-years, hepatocellular carcinoma is ranked as the sixth most common neoplasm and the third leading cause of cancer death (1). Heterogeneous data has been reported regarding liver transplantation (LT) for hepatocellular carcinoma (HCC) in Latin America. We aimed to describe clinicalpathogical characteristics and survival analysis of HCC after LT in a single center in Medellin-Colombia.
Methods: We performed a retrospective cohort study of all consecutive adult orthotopic liver transplant (OLT) patients from April 1st, 2013 through December 31st, 2018. Only patients who were diagnosed with incidental or pre-operative HCC in the Sanvicente Fundacion Hospital Transplant center were studied. We compared the patients who were within Milan criteria versus beyond Milan criteria. We first analyzed the clinicopathological characteristics, and then assessed the prognostic factors and survival rates using Kaplan-Meir curves. The Cox-Hazard model was used for the multivariate analysis and p values less than 0.05 were considered significant.
Results: Our transplant center performed 163 OLT of which 26.3% recipients were diagnosed with HCC ($N = 43$). The 43 patients consisted of 31 males and 12 females, mean age 61.3 (58–71) years at the time of the diagnosis, Child-Pugh clasification A 32.56%, B 55.81%, and C 11.63%, within Milan criteria 72.09%, beyond Milan criteria 27.91%, patients who received TACE 24%, no TACE 19%, Median follow-up in the overall cohort was 847.3 days, (IQR: 338.5–1308 day). Patient survival rate at 1 year were 85.7%. The median survival was 952.9 days for within Milan criteria and 574.33 days for beyond Milan.REFERENCES.Forner A, Reig M, Bruix J. Hepatocellular carcinoma. The Lancet. marzo de 2018;391 (10127):1301-14.

PO335 COMPARISON OF EARLY AND LATE POSTTRANSPLANT OUTCOMES IN KIDNEY TRANSPLANTATION DEPENDENT ON PRE-TRANSPLANT KIDNEY BIOPSY RESULTS AND DONOR AGE

Janis Jusinskis[1], Vadims Suhorukovs[1], Aleksandrs Malcevs[1], Ieva Ziedina[1], Linda Stelce[1], Viktors Sevelovs[2], Rafails Rozentals[1]
[1]Riga Stradins University; [2]Latvian Transplantation Center

Background: Kidney transplantation (KT) can be associated with the risk of sclerotic lesions in kidney grafts and negative impact on outcomes irrespective of the age of deceased donors (DD).

The aim of this study was to analyse the frequency of sclerotic changes and posttransplant results in different DD age groups.
Materials/methods: In this study we analysed all consecutive DD KT performed during the period since 01.01.2004 till 31.12.2010, where pre-transplant kidney biopsies were performed and recipients were available for 8-year follow-up (189 KT from 109 DD). Biopsies were performed by tru-cut biopsy needle just before the start of organ perfusion. At the biopsy the presence and percent of interstitial sclerosis (IS), glomerular sclerosis (GS) and arteriosclerosis (AS) were analysed.

All cases were divided into groups dependent on sclerosis (no sclerosis or minimal sclerosis - IS $<$ 10%; medium sclerosis - IS 10–20% or IS $<$ 10% with combination of GS or AS; higher grade sclerosis - IS 10–20% with combination of GS or AS or IS $>$ 20%).

We analysed the impact of revealed sclerosis on posttransplant outcomes (delayed graft function (DGF), acute rejection rate, surgical complications, graft function postoperatively, graft and patient 8-year survival), dependent on DD age ($<$ 50 y.o.; 50–59 y.o.; 60 + y.o.).
Results: Analysis of all cases showed that different grades of sclerosis were met in each of DD ages subgroup. Recipient ages correlated with DD ages, irrespective of the presence of sclerosis revealed at biopsy.

Analysis of early posttransplant outcomes showed only higher incidence of DGF in KT from older DD with minimal or no sclerosis ($p < 0.05$) compared with other DD ages and the same sclerosis grade. All other comparisons showed no significant differences in rates of early outcomes.

Comparison of late outcomes showed lower patient survival in KT from DD 60 + y.o., associated with higher age of recipients in this group, as also worse graft survival in patients

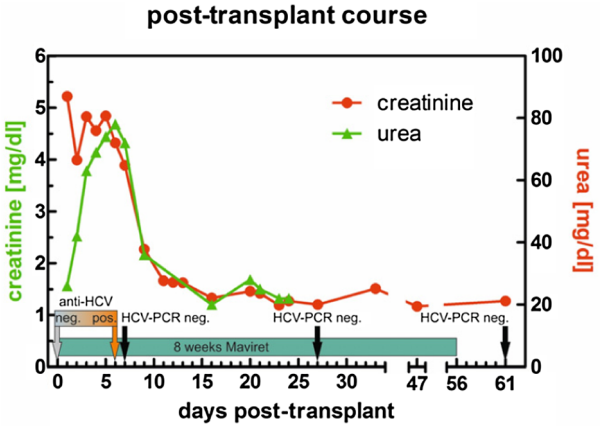
PO336 TRANSPLANTATION OF AN HCV-INFECTED KIDNEY INTO AN UNINFECTED RECIPIENT

Florian Westphal, Stefan Reuter, Christian Wilms, Barbara Suwelack
Münster University Hospital

Renal transplantation has proven to be the optimal therapeutic option for end-stage renal disease increasing expectancy and quality of life. However, the organ shortage needs approaches to expand the donor pool. The mean waiting time for a transplant kidney within the ET (Eurotransplant) area is about six to seven years, and even longer in Germany. In the "THINKER"-study, the possibility of kidney transplants from HCV-positive donors to HCV-negative recipients has recently been investigated. In the following, we report our first HCV-negative patient receiving an HCV-positive transplant kidney.

A 49-year-old female patient suffered from ESRD (end-stage renal disease) caused by a mixed genetic-autoimmunological atypical hemolytic uremic syndrome. A long waiting time was expected because she had blood group 0. In December she received an AB0-compatible kidney transplant from an HCV-RNA positive, 33-year-old donor (106 copies/ml, genotype 1b).

The initial immunosuppressive therapy consisted of prednisolone, mycophenolate sodium and tacrolimus. Furthermore, an inductive therapy with basiliximab was given on day 0 and day 4. The patient received CMV and



pneumocyystis carinii prophylaxis with trimethoprim/sulfamethoxazole and valganciclovir. Graft started to work on postoperative day four (Fig. 1).

HCV prophylaxis with glecaprevir and pibrentasvir [Maviret (R)] was given immediately post-surgery and carried on during the post-transplant time for eight weeks. Further posttransplant time proceeded without HCV-related complications. The patient developed anti-HCV antibodies within six days after transplantation. The antiviral therapy ended after eight weeks. Frequent HCV-PCRs showed negative results and are scheduled in three and six months.

We conclude that despite transmission of HCV, kidneys from HCV viremic donors can be used with precaution in selected patients.

PO337 IDENTIFICATION AND DETERMINANTS OF CARDIAC ALLOGRAFT VASCULOPATHY (CAV) TRAJECTORIES AFTER HEART TRANSPLANTATION

Guillaume Bonnet[1], Guillaume Coutance[1], Maud Racape[1], Marc Raynaud[1], Jan van Keer[2], Marie-Cécile Bories[1], Shaida Varnous[3], Philippe Rouvier[3], Romain Guillemain[4], Lucien Lecuyer[4], Patrick Bruneval[4], Jean-Paul Duong-Van-Huyen[1], Jean-Luc Taupin[5], Maarten Naesens[2], Carmen Lefaucheur[1], Xavier Jouven[1], Jon Kobashigawa[6], Alexandre Loupy[1]

[1]Paris Transplant Group, Paris; [2]KU Leuven; [3]Pitie Salpetriere Hospital, Paris; [4]Georges Pompidou Hospital, Paris; [5]Saint Louis Hospital, Paris; [6]Advanced Heart Disease Section, Cedars-Sinai Heart Institute

Purpose: CAV is a major contributor of heart transplant recipient's mortality. However, little is known about CAV long-term evolution profiles and their determinants.
Material/Methods: We enrolled 1,420 consecutive heart transplant patients from 4 international centers (two centers in France; one in Belgium; one in the US) between 2004 and 2015. Angiograms were routinely performed according to a prespecified protocol. CAV grades were measured using the ISHLT classification. Patients underwent an evaluation comprising clinical, biological, histological and immunological parameters. Unsupervised Latent class mixed models were used to identify distinct trajectories of CAV progression. Multinomial regression analysis was used to determine the parameters associated with the CAV trajectories.
Results: A total of 1,315 patients were included (830 in European development cohort and 485 in the validation cohort from the US). The median follow-up post-transplant was 7.0 years (IQR = 5.1–9.0) with 4,601 coronary angiograms analyzed. Four distinct profiles of CAV trajectories were identified (Figure 1): CAV profile# 1 characterized by patients with low baseline and non-progression, CAV profile#2 characterized by patients with low baseline and slow CAV progression, CAV profile#3 characterized by patients with mild baseline CAV and mild progression, and CAV profile#4 characterized by patients with mild baseline and accelerated CAV progression. 5 independent determinants of CAV trajectories were identified: donor age ($p < 0.001$), donor tobacco consumption ($p = 0.005$), donor male gender ($p < 0.001$), post-transplant dyslipidemia ($p = 0.02$) and the presence of DSA at transplant ($p < 0.001$). **Conclusion:** In a large multicentric cohort of heart transplant recipients, we identified for the first time 4 distinct CAV trajectories and their determinants. This study provides fresh evidence of a trajectory-based assessment for improving risk stratification of heart transplants.

PO338 THE INCIDENCE OF HYPERKALAEMIA OR HYPOPHOSPHATAEMIA WITHIN THE FIRST 6-MONTHS OF RENAL TRANSPLANT: A RETROSPECTIVE ANALYSIS ON RE-ADMISSION RATES FOLLOWING RENAL TRANSPLANT

Daveen Rattan, Harriet Giles, John Black, Mohamed Morsy, Anna Rizzello, Tahir Doughman, Atul Bagul

Leicester General Hospital, University Hospitals of Leicester

Aims: Following transplant, recipients are initially reviewed in the outpatient setting 3 times weekly. Assessment involves routine blood tests, including both potassium and phosphate levels. Hyperkalaemia and hypophosphataemia can be observed in recipients post renal transplant. Whilst the exact aetiology is not fully understood, causes are often multifactorial. The aim of this study is to investigate the rate of both derangements within 6 months of transplantation, and the subsequent impact on re-admission rates.
Methods: All patients undergoing renal transplant between January 2018–July 2018 were identified from our central database. Electronic patient records were accessed identifying all patients with hyperkalaemia (K+ level > 5.5 mmol/l) and/or hypophosphataemia (PO4 level < 0.9 mmol/l). All patients requiring admission for treatment during the first 6 months following initial discharge were highlighted.
Results: Salient study findings are summarised in the table below. Mean (± standard deviations) are used unless otherwise specified.

Recipient criteria		Potassium/phosphate findings	
Number of participants (*n*)	63	High K + 1 month/average level (mmol/l)	4.8%/6.2
Age (years)	56.1 (± 13.8)	High K + 6 months/average level (mmol/l)	3.2%/6.2
Age range (years)	21–81	Low PO4 1 month/average level (mmol/l)	11.2%/0.46
Live related/ unrelated Rtx	22.5%	Low PO4 6 months/average level (mmol/l)	3.2%/0.59
DBD Rtx	38.7%	Total K+ admission rate	8.1%
DCD Rtx	37%	Total PO4 admission rate	14.5%
Dual Rtx	4.8%		
Autologous Rtx	1.6%	Combined admission rate	22.6%

Discussion: Total number of renal transplants was 63 ($n = 63$). The average age of recipient was 56.1 years (range 21–81 years). 22.5% of transplants were live related/unrelated. 38.7% recipients were DBD, whilst 37% were DCD. 3 of the recipients received a dual kidney transplant (DKT). One autologous transplant. Hyperkalaemia admission rate at 1 month was 4.8%, with an average K+ level of 6.2 mmol/l, and 3.2% at 6 months respectively. Hypophosphataemia readmission rates were comparatively higher, with a 1 month admission rate of 11.2% (average phosphate levels 0.46), and 3.2% at 6 months (average phosphate level 0.59 mmol/l). Total readmission rates within 6 months post-discharge was 22.6%.
Conclusion: Six month K+/PO4 related admission rates post discharge are as high as 22.6% at significant financial burden to the trust. Our unit is currently devising discharge strategies to reduce such incidences.

PO339 KIDNEY TRANSPLANTATION FROM DONORS AFTER UNCONTROLLED CIRCULATORY DEATH – SINGLE CENTER EXPERIENCE

Jiri Molacek[1], Vladislav Treska[2], Tomas Reischig[2], Lukas Kielberger[2], Martin Kacer[2]

[1]University Hospital in Pilsen, Charles University in Prague; [2]Transplant center, University Hospital in Pilsen, Charles University

Introduction: The lack of organs for transplantation is worldwide problem. One of the options how to deal with this issue is to accept extended criteria donors (ECD). Donors after circulatory death (DCD) create probably one of the major group of ECD. However, DCD is still not common in all countries. This is in fact a heterogeneous group of donors (controlled and uncontrolled DCD). The aim of our study is to present a single center experience from University Hospital in Pilsen, which was the first center in Czech Republic where the uncontrolled DCD has been started.
Methods: In our transplant center in Pilsen, we have performed 41 kidney transplantations from DCD in time period 2002–2018. All patient´s data and graft informations were collected.
Results: Thirty-day mortality was 0 %, morbidity 11%. Primary non-function was presented in 7.1%, and delayed graft function in 17.9% cases. The long-term results are fully comparable with kidneys transplanted from donors after brain death.
Conclusion: Kidney transplantation from DCD is associated with acceptable results. Our center strongly supports this concept and has very good experiences with DCD donors.

PO340 LIVER ALLOGRAFT FIBROSIS AFTER PEDIATRIC LIVER TRANSPLANTATION: RISK FACTORS AND TOOLS FOR EARLY DETECTION

Roberta Angelico, Paola Francalanci, Daniela Liccardo, Domiziana Pedini, Chiara Grimaldi, Maria Cristina Saffioti, Manila Candusso, Andrea Pietrobattista, MariaSole Basso, Carlo Dionisi Vici, Lidia Monti, Massimo Rollo, Rosanna Pariante, Roberto Bianchi, Sergio Picardo, Valerio Nobili, Marco Spada

Bambino Gesù Children Hospital IRCCS

Introduction: Allograft fibrosis (AF) after pediatric liver transplantation (pLT) influences long-term outcomes. Our aim was to define the incidence and risk factors for AF after pLT.
Methods: A retrospective single-center analysis of clinical and histological data was performed, including all pLT with at least 5-years of follow-up and undergoing protocol liver biopsy at 6 months, 1–2–5 years. Fibrosis was reviewed using the METAVIR and Ishak systems, and the novel Liver Allograft Fibrosis score (LAFs).
Results: Out of 200 pLT performed between 2008 and 2018, 50 (25%) LT [age:2.5 (1–19) years, male 33 (66%)]were included and 200 biopsies reviewed. Type of grafts comprised 14 (28%) whole, 26 (52%) split, 6 (12%) reduced, 4 (8%) living-donor grafts. Tacrolimus-based immunosuppression regimen was used. After LT, 9 (18%) biliary and 7 (14%) vascular complications, 12 (32%) acute rejections were observed. At 5-years, the 3 scoring

systems showed similar incidence of fibrosis (n = 41.82%) and fibrosis grading [Metavir:1.1 ± 0.5; Ishak:1.3 ± 0.8; LAFs:1.5 ± 1.2;(p = 0.345)]. No differences were found in fibrosis progression rate (progression: 62% vs. 58% vs. 70%; stable: 38% vs. 42% vs. 30%; p =n.s.). In the LAFs, fibrosis involved the portal tract (82%), sinusoidal (14%) and centrolobular (12%) areas. Children with fibrosis progression had higher incidence of biliary complications (p = 0.043) and prolonged ischemic times (p = 0.038), 34% had normal liver function tests. At Cox-analysis only biliary complications (HR:0.128, CI:0.017–0.972, p = 0.037) were associated with fibrosis progression, which was found mainly in sinusoidal area.

Conclusion: Our series confirms that AF has high prevalence after pLT, however we found low fibrosis grading compared with other series. Fibrosis progression was associated with post-LT biliary complications and detected in sinusoidal area. The novel LAFs histological system, which defines the areas of fibrosis, is a useful tool to early detect the causes of AF.

PO341 RISK FACTORS OF EPSTEIN-BARR VIRUS REACTIVATION AND POST-TRANSPLANT LYMPHOPROLIFERATIVE DISORDERS DURING THE FIRST YEAR AFTER KIDNEY TRANSPLANTATION: RESULTS FROM A LARGE MULTI-CENTRE STUDY

Arturo Blázquez-Navarro[1], Chris Bauer[2], Birgit Sawitzki[1], Richard Viebahn[3], Timm Westhoff[3], Petra Reinke[1], Oliver Thomusch[4], Christian Hugo[5], Michal Or-Guil[6], Nina Babel[3]

[1]Charité; [2]MicroDiscovery; [3]Ruhr University Bochum; [4]University Clinic Freiburg; [5]University Clinic TU Dresden; [6]Humboldt University

Epstein-Barr virus (EBV) can reactivate in transplant patients leading to post-transplant lymphoproliferative disorders (PTLD). Current recommendations suggest monitoring of EBV load at regular intervals. However, the predictive value of EBV load for EBV-associated complications in different risk populations is not clear so far.

We performed a large prospective multicenter study on 541 renal transplant patients and analysed 3,133 blood samples for EBV load by qPCR throughout 8 visits during the first post-Tx year. Patients with D+/R− EBV or CMV mismatch or the use of rabbit ATG received valganciclovir prophylaxis.

109 patients (20.1%) had detectable EBV viral load; 37 patients (6.83%) had an elevated load over 2,000 copies/ml and 11 patients (2.03%) had a high load over 10,000 copies/ml. At the end of the study, 85.7% of the patients with reactivation were negative for EBV load. Risk factors for reactivation were EBV and CMV mismatch. Interestingly, incidence of EBV was significantly associated with CMV reactivation, both for detectable viraemia (p = 0·0231; OR = 1·86) and for elevated viraemia (p = 0·0413; OR = 2·76). Immunosuppressive therapy was associated with EBV incidence, with highest incidence for patients under ATG (p = 0·0225; OR = 1·69) and lowest for patients under basiliximab and rapid steroid withdrawal) (p = 0·0432; OR = 0·59). However, no effect of further medication including valganciclovir prophylaxis was found for elevated EBV. There was only one case of serious PTLD in an ATG-treated patient with EBV viral load of 12,271 copies/ml. No EBV-associated transplant rejections were observed.

Early onset of EBV-reactivations is not associated with severe complications and further studies are required to determine the long-term effect.

PO342 IMMUNOLOGICAL RISK MONITORING IN PATIENTS WITH HIGH IMMUNOLOGIC RISK AND ITS EFFECT ON CLINICAL OUTCOMES

Zuhal Atan ucar[1], Yener Koc[2], Ayse Sinangil[1], Soykan Barlas[3], Tevfik Ecder[1], Emin baris Akin[3]

[1]Division of Nephrology, Department of Internal Medicine, Demiroğlu Bilim University Medical Faculty, Istanbul-Turkey; [2]Demiroglu Bilim University; [3]Unit of Renal Transplantation, Department of General Surgery, Demiroğlu Bilim University Medical Faculty

In this study, immunological follow-up of the patients with immunological risk and to determine of the effects of treatment in the patients who were treated with desensitization were aimed.

Material and method: We retrospectively evaluated the patients who underwent renal transplantation with immunological risk between 2010 and 2018. Living donor transplantation patients with PRA, DSA and/or single BEAD positivity, re-transplantation were included in the study. PRA and/or DSA levels of pretransplant and posttransplant period were evaluated in all patients. We compared follow-up of immunological data and clinical outcomes of patients who had desensitization (Group 1) versus that did not have (Group 2).

Results: One hundred seventeen patients were included this study.34 patients had desensitization.83patients hadn't have desensitization. Female gender was higher in Group 1 patients (p < 0.001).HLA-MM, PRA class 2, DSA class 2 levels were higher in group 1 in pretransplant period. While the positivity for DSA-class 1 was 41.2% and for DSA-class 2 was 76.4%, in group 1 at pretransplant period, these values were 5.8% and 32.3% at 7th days, 14.7% and 44.1% 3rd months, only 2.9% and 29.4% at 6th months in posttransplant period, respectively. While the positivity for DSA-Class1 was 13.1% and for class2 was 52.5% in group 2 in pretransplant period, these values were7.1% and64.3% at7th days,7.3% and34.1% at 3rd months,6.7% and 53.3% at 6th months in posttransplant period, respectively. During the follow-up period, it was determined that the patients with positive in group 1 were significantly lower on PRA class 2 values at the 1stmonth and on DSA class2 values at the 1st and 3rd months compared to the pretransplant period (p:0.047, 0.015 and0.024respectively).

Conclusion : Immunological risk decreases with desensitization therapy in the patients with high immunological risk. This decrease is more distinctive in the first3 months ofposttransplant in which acute rejection attacks are more common.

PO343 CHAGAS DISEASE (CD) IN COMBINED PANCREAS-KIDNEY (SPK) TRANSPLANTATION: EXPERIENCE IN A SINGLE CENTER IN ARGENTINA USING REAL-TIME QUANTITATIVE PCR FOR EARLY DETECTION AND TREATMENT

Alvaro Alcaraz, Enzo Giordano, Teresita Alvarellos, Juan Pablo Caeiro, Javier De Arteaga, Martin Maraschio

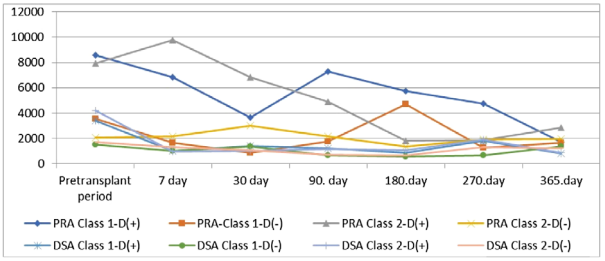
Hospital Privado Universitario de Cordoba

Background: Allograft scarcity is one the main problems in SPK. In CD endemic areas as Argentina these limitations are greater, due to fear of transmitting or reactivation of *Trypanosoma cruzi (T. cruzi)* in the recipient. There is previous experience in solid transplant in the context of CD but luck of data specifically for SPK. We describe a single center experience in Argentina with donors and/or recipients of SPK with CD, using real time quantitative PCR (qPCR) for the early detection of T. cruzi.

Methods and Materials: We evaluated all SPK performed in Hospital Privado Universitario de Córdoba to recipients with high-risk for CD from years 2003 to 2018. All patients signed a specific informed consent prior SPK. Immunosuppression included induction with Thymoglobulin® or ATG® (except for recipients at risk for CD), and maintenance with tacrolimus, mycophenolate and prednisone. Postoperative CD-specific prophylaxis was not started in any patient. Frequency of T.cruzi monitoring using qPCR was weekly in the first two months, every 14 days from the 3rd to 6th month, and then monthly up to one year.If acute T. cruzi infection was detected during follow-up, preemptive therapy that included nifurtimox or beznidazole was initiated for 60 days. The study was approved by the institutional ethic committee.

Results: We describe a total of 9/142 (6.33%) SPK were performed in high-risk patients for CD during the study period. SPK was performed in 4 seronegative recipients using organs from seropositive cadaveric donors and in 5 seropositive recipients. During follow up no parasitic replication, evaluated by qPCR, was found in seronegative recipients. We found early T. cruzi replication in 1 seropositive recipient. Antiparasitic therapy showed a rapid parasite load decreased in this unique patient. There were no deaths related to CD.

Conclusion: The use of qPCR to detect T. cruzi replication allowed early diagnosis and properly treatment in high-risk patients for CD



PO344 DE NOVO HUMAN IMMUNODEFICIENCY VIRUS IN A RENAL TRANSPLANT RECIPIENT: A CASE REPORT

Elena Semenova[1], Pavel Vladimirov[2], Alexey Vinokurov[2]

[1]North-Western State Medical University named after I.I. Mechnikov; [2]Leningrad Regional Clinical Hospital

Background: Human immunodeficiency virus (HIV) was detected in renal graft recipient in 6 years after kidney transplantation (KT). It is essential to choose the treatment for this category of patients.

Methods/Materials: The patient is female aged 51. KT was performed from HIV-negative donor to HIV-negative recipient in 2012. Initial immunosuppressive therapy included basiliximab, tacrolimus (Tac), mycophenolic acid (MPA), steroids. Renal function was decreased (serum creatinine 0.150–0.170 mmol/L). In a 6 month was detected a biopsy-proven acute T-cell rejection and calcineurin inhibitors toxicity. Immunosuppressive therapy was adjusted: intravenous methylprednisolone (MP) 1.5 g, MPA increased since 720 into

1,080 mg/day, the level Tac was 4 ng/ml. Renal function was stabilized (serum creatinine 0.187–0.191 mmol/L). In 2 years after KT papillomatosis of skin and psoriasis activity were found. Therefore immunosuppressive therapy was readjusted: Tac withdrawal, everolimus (EVE) 2.75 mg/day + MPA (1,440 mg/day) + steroids. Renal graft function improved (serum creatinine 0.146–0.142 mmol/L). 24-h proteinuria (24 h-*p*) 0.2–0.3 g. In 6 years after KT HIV was detected (viral load – 10,000,000 copies/ml and CD4 + T cell counts – 216/mcL).
Results: The patient was treated with highly active antiretroviral therapy (HAART): raltegravir, efavirenz, lamivudine. In 6 month of HAART the viral load became negative; CD4 + T cell counts (3–6–9–11–12 mth) – 261–250–314–299–304/mcL; CD8 + T cell counts (3–6–9–11–12 mth) – 322–266–304–296–278/mcL accordingly). Immunosuppressive therapy was decreased: MPA 720 mg/day + EVE 3 mg/day + MP 6 mg/day. Renal graft function was stable: serum creatinine 0.136 mmol/L, 24 h - *p* 0.29 g.
Conclusion: In case of HIV in kidney transplant recipients the treatment is similar to that of the general population. The appointment of antiviral therapy should consider drug interactions. Minimization of immunosuppressive therapy is needed.

PO345 SURGICAL AND UROLOGICAL COMPLICATIONS IN THE FIRST YEAR FOLLOWING DECEASED DONOR RENAL TRANSPLANTATION: A SINGLE CENTRE STUDY

Ayah Mekhaimar, Hannah Maple, Nizam Mamode, Rhana H. Zakri, Nicos Kessaris
King's College London/Guy's and St Thomas' Hospital

Background: Renal transplantation is the gold standard treatment for end-stage renal disease. Improvements in donor/recipient matching, better immunosuppression regimens and advancing surgical techniques have seen a significant increase in post-operative survival. Despite these advances, resulting morbidity or even mortality does still impact on patient outcomes. This study aimed to determine the number of complications up to 12 months post-renal transplant at our centre.
Methods: Retrospective data on deceased donor renal transplant recipients were collected between 2012 and 2013. Patient demographics, donor/recipient characteristics and 12-month post-operative surgical and urological complications were collected. Complications were classified according to the Clavien-Dindo (CD) grading system.
Results: $N = 188$ patients were included. 161 (85.6%) recipients had at least one post-operative complication with a total of 892 complications reported, 148 (17%) of which were urological. The average age was 52 years (SD 12.45). 127 (67.6%) were male. 102 (54.3%) had a transplant from a DBD donor. There were significantly more DCD recipients who suffered complications versus DBD (91.9% vs. 80.4%, $p = 0.026$). 16.9% needed a blood transfusion, 11% had a collection/lymphocele and 10.4% suffered urinary tract infections. When classified, the most common complication was a CD grade II (46.4%), followed by CD grade I (23.6%). Graft loss (CD IVa) occurred in 18 (9.6%) cases and death (CD V) in 6 (3.2%) patients (2% & 0.7% of overall complications respectively). Complications were more common in the early post-operative period (median 42 days, IQR 99).
Conclusion: This study showed a large number of complications occurring during the first year post-transplant. Accurate centre specific risk stratification is a vital part of the consent process. Prevention, a high index of suspicion, and timely treatment are essential to ensure the impact of post-operative complications is minimised.

PO346 A SYSTEMS-MEDICINE BASED APPROACH IDENTIFIES BIOMARKER SETS FOR EARLY PREDICTION OF ALLOGRAFT FUNCTION IN KIDNEY TRANSPLANT PATIENTS

Birgit Sawitzki[1], Chris Bauer[2], Nicole Wittenbrink[3], Kerstin Wolk[1], Robert Sabat[1], Harald Seitz[4], Sven Olek[5], Philipp Pagel[6], Timm Westhoff[7], Petra Reinke[1], Oliver Thomusch[8], Christian Hugo[9], Michal Or-Guil[10], Nina Babel[7]
[1]Charité; [2]MicroDiscovery; [3]Humboldt University ; [4]Fraunhofer Institute; [5]Epiontis; [6]Numares; [7]Ruhr University Bochum; [8]University Clinic Freiburg; [9]University Clinic Dresden; [10]Humboldt-University

Early personalized therapy in patients at risk could prevent allograft loss and associated complications. However, there are no established markers predicting chronic allograft injury so far. Previous studies in renal transplant patients demonstrated that one-year renal graft function is an important predictor of transplant survival at ten-years post-transplant. Within the collaborative project e:KID we tried to establish a tool supporting risk prediction and personalized treatment that can be applied at early stage after kidney transplantation.

Five hundred ninety-six renal transplant patients were included and monitored at 8 different time points. We aimed to predict renal function at 12 months post-transplant based on marker analyses of earliest possible time point. Several high throughput technologies were applied to analyze markers from different regulation levels such as gene expression, protein expression, epigenetics, metabolites, cellular and clinical parameters. Uni- and multivariate linear regression were used to predict 1-year graft outcome using marker or marker combinations from different time points. To further evaluate the classification performance, we ran a resampling analysis by randomly sampling class assignment.

Several single markers obtained already at week 2 post-transplant were able to predict 1-year graft function. While single parameter had a rather low predictive power, successive addition of more parameters (from one to finally four) increased the predictive value. Importantly, exclusively the combination of markers from different regulation levels significantly improved the classification outcome.

Taken together, our multi-scale data emphasize the importance of systems medicine approach enabling risk prediction in kidney transplant patients.

PO350 CLINICAL IMPORTANCE OF PROTEINURIA AND ANTI HLA ANTIBODY IN RENAL ALOGFRAT FUNCTION

Galina Severova-Andreevska[1], Igor Nikolov[1], Lada Trajceska[1], Ninoslav Ivanov[2]
[1]University Clinic od Nephrology Skopje; [2]Univrsity " Sts Cyril and Methodius", RN Macedonia

Proteinuria is a marker of kidney tissue injuries, regular used in assessment of renal allograft function. The presence of de novo anti HLA antibody (Ab) can cause ABMR or 'silence rejection'. The aim of our investigation was to explore their occurrence and clinical importance after transplantation.
Material and methods: We follow up 51 kidney transplant recipient, non sensitized, on the quadriple immunosuppressive protocol 1, 12 and 24 month after transplantation. Anti HLA Ab were detected with Luminex technic and MFI > 800 was taken as a significant. 24 our proteinuria was measured in g/L and value > 0.07 was taken as a significant. Kidney biopsy was performed on the month 12 and for tissue analysis Banff classification was used.
Results: From all, 17 pts developed de novo anti HLA ab. More of them had proteinuria > 0.07 on the month 12 after transplantation (3 v.s. 14, $p = 0.026$). Also high number of pts with anti HLA ab from class I had significant proteinuria (2 v.s 11, $p = 0.041$). Findings of C3 > 2 deposition on IF was accompanied with higher proteinuria (0.51 ± 0.5 v.s. 1.24 ± 1.3, $p = 0.044$). Higher percentage of pts with significant proteinuria had mix tissue injuries including ABMR and other different categories of Banff classification (42% v.s. 70%, $p = 0.037$). Univariant linear regression analysis find donor age, presence of cat.2 (ABMR) according to Banff classification, DSA and MFI as statistical significant prognostic values for appearing of proteinuria in kidney allografts.
Conclusion: Our study show significant proteinuria in presence of de novo anti HLA ab and mix tissue injuries including ABMR and confirmed them as a importance factors in following up kidney allograft function.

PO351 IS SUNSCREEN USE AMONGST RENAL TRANSPLANT RECIPIENTS A BURNING ISSUE? A RETROSEPCTIVE ANALYSIS OF RECENT TRANSPLANT PATIENTS

Zaynab Chatoo, Nicholas Harry, Zoe Cass-Tansey, John Black, Mohamed Morsy, Anna Rizzello, Tahir Doughman, Atul Bagul
Leicester General Hospital, University Hospitals of Leicester

Aims: Skin cancer remains the commonest malignancy amongst solid organ transplant recipients. Studies suggest approximately only a quarter of all recipients are aware of such risks. This retrospective study is aimed at highlighting recipient compliance with sunscreen use in patients receiving a renal transplant. Additional recipient risks are also considered including previous Fitzpatrick skin type, sun bed use, hours of sun exposure and other associated risk factors.
Methods: A standardised scoring risk questionnaire was piloted and distributed amongst recipients receiving a renal transplant within the last 12 months. Based on risk scores, responders were categorised into high (+1 standard deviation above mean score) and low (- 1 standard deviation below mean score) risk groups. Data was processed using SPSS.
Results: There were 45 responders. Findings are summarised in the table below. Percentages, means (±SD) are used, unless otherwise specified.

Discussion: There were 45 responders. All patients were on standard immunosuppression as per Trust guidelines (Adoport 0.05 mg/kg - target levels 5–8; Mycophenolate 500 mg BD; Prednisolone 20 mg - on a 5 mg fortnightly reduction regimen). The average risk score was 7.2 (± 2.07). Scores of 10 or above were considered high risk. The modal age ranges were 51–55 and > 65 years. 42.2% of responders were female, 57.8% male. Fitzpatrick skin type III was the most abundant amongst responders (31.8%). Previous sunbed use was recognised in 4.4%. 44.5% of repsonders had previous sun exposure culminating in redness or blistering. Two responders had a history of skin malignancy. 8.9% had a positive family history for skin cancer. 31.1% of recipients admitted to never using suncreen. Only one responder admitted to

Gender	Male (57.8%)	Female (42.2%)					
Age	<41 (18.2%)	41–45 (13.6%)	46–50 (6.8%)	51–55 (18.2%)	56–60 (11.4%)	61–65 (13.6%)	>65 (18.2%)
Previous Sunbed use	Yes (4.4%)	No (95.6)					
Previous Sunburn	None (55.5%)	Redness (37.8%)	Blistering (6.7%)	Hospitalisation (0%)			
Previous Skin Cancer	Yes (4.4%)	No (95.6%)					
Family history skin cancer	Yes (8.9%)	No (91.1%)					
Skin Type (Fitzpatrick)	I (2.7%)	II (9.1%)	III (31.8%)	IV (29.5%)	V (25%)	VI (2.7%)	
Suncream use	Never (31.1%)	Some days (46.7%)	Most Days (15.6%)	Everyday (6.7%)			
Suncream use High risk (+1 SD above mean)	Never (20%)	Some days (60%)	Most Days (20%)	Everyday (0%)			
Suncream use Low risk (−1 SD below mean)	Never (40%)	Somedays (40%)	Most Days (20%)	Everyday (0%)			
Risk Score	Mean- 7.20	Mode- 8	Median- 7	SD- 2.07			

using sunscreen daily. 20% of recipients in the high risk group admitted to never using suncreen, as opposed to 40% in the low risk group.

PO352 EVEROLIMUS COMBINATION TREATMENT WITH MYCOPHANOLIC ACID IN PATIENTS UNDERGONE ORTHOTOPIC LIVER TRANSPLANTATION

Efstathios Antoniou, Christos Damaskos, Nikolaos Garmpis, Maria Mavri, Aikaterini Lambathariou, Panagiota Paraskeva, Dimitrios Karousos, Alkiviadis Kostakis

Laiko General Hospital, National and Kapodistrian University of Athens, Medical School

Introduction: We present the results from our liver transplant centre using the combination treatment of everolimus and mycophanolic acid, as *de novo* anti-rejection treatment after orthotopic liver transplantation (OLTx).
Methods: fifteen out of 41 patients in our centre received the above treatment. 8 of them had hepatocellular carcinoma (HCC), one had acute hepatic failure due to epitheliod haemangioendothelioma (EHE), 1 had PSC and a single kidney, 1 fulminant HBV hepatitis, 1 acute on chronic HBV hepatic failure and 1 with adult polycystic liver and kidney desease (APLKD). In addition, one patient presented Thrombotic Thrombocytopenic Purpura (TTP) three weeks after OLTx due to Tacrolimus and converted to ERL. All patient received *de novo* anti-rejection therapy with everolimus, MPS and prednisolone, except the one with single kidney, who received half dose of MPS due to low white cell count.
Results: All patients had an improving liver function, coming almost to normal by the end of the first week. 5 out of 8 patients had liver cirrhosis due to viral hepatitis and HCC. 1 had PBC cirrhosis and HCC. The patient who had HCV cirrhosis, HCC and portal vein thrombosis developed massive brain haemorrhage on the 8th postoperative day and died. The one with PSC and single kidney, had also everolimus dose reduced to half, due to very high everolimus levels. This patient had two episodes of acute rejection. He was firstly treated effectively with high dose of steroids and then converted to Tacrolimus, keeping Everolimus and steroids, 3 months after OLTx, with very good response. Twelve years after the 1st OLTx and ERL treatment, 10 out 15 patients are alive. 4 out of 15 had a moderate to severe acute rejection and treated effectively with high dose of steroids for 3 days. The APLKD presented steroid resistant rejection and treated also with monoclonal Ab. One patient presented with legs lymphydema 5–6 years post-OLTx and converted to tacrolimus. From *t*

PO353 ARTIFICIAL INTELLIGENCE FOR LIVER TRANSPLANT (AI4T): PREDICTING HEPATIC GRAFT SURVIVAL

Laura Wingfield[1], Carlo Ceresa[1], Jacques Fleuriot[2], Simon Knight[1]
[1]University of Oxford; [2]University of Edinburgh

Background: In the UK, the number of those awaiting a liver transplant continues to rise and a shortage of organs results in waiting list deaths. It is increasingly important to use advanced computer modelling to monitor organ allocation and improve utilisation. The aim of this research was to review the evidence on the use of Artificial Intelligence (AI) methods to predict graft survival following liver transplantation.
Methods/Materials: A systematic review of the literature was performed. PubMed, Cochrane, MEDLINE, Science Direct, Springer Link, Elsevier, and reference lists were analysed for inclusion on 9 November 2017.
Results: A total of 51 papers were reviewed, of these, 10 papers were included as they examined AI techniques for prediction of post-transplant graft survival. A total of 5,706 liver transplants were included. All ten papers utilised supervised learning techniques, and eight groups employed artificial neural networks. Overall, 80% of papers showed a more accurate overall graft survival prediction using newer AI techniques when compared with conventional statistical techniques such as regression modelling.
Conclusion: AI techniques can provide high accuracy in matching donors and recipients. This technology is especially robust when confronted with noisy data that may be generated by nonlinear processes, making AI a crucial tool to help develop predictive clinical models.

PO354 REVERSAL OF DIASTOLIC FLOW IN SEGMENTAL ARTERIES IN PATIENTS WITH DE NOVO TMA AFTER RENAL TRANSPLANTATION

Andreja Aleš Rigler[1], Jandranka Buturović Ponikvar[2], Željka Večerić Haler[2], Nika Kojc[3], Miha Arnol[2]
[1]University Clinical Center Ljubljana; [2]University medical centre Ljubljana; [3]Inštitut za patologijo, Medicinska fakulteta

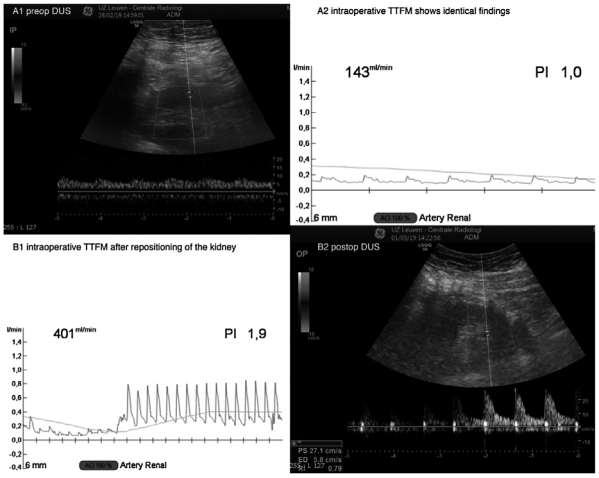
Introduction: Higher values of resistive index (RI), measured on segmental arteries are observed in acute tubular necrosis (ATN) after renal transplantation. With the exception of humoral rejection, the connection between higher RI and acute rejection has not been established. High RI with reversal of diastolic flow and absence of renal venous flow is typical for venous thrombosis of a renal transplant. We describe a similar reversal of arterial diastolic flow in patients with de–novo thrombotic microangiopathy (TMA) after renal transplantation.
Methods: We analysed Doppler indexes of 5 renal transplant patients who had exacerbation of transplant function and TMA confirmed by biopsy immediately after renal transplantation (4 patients) or in early post-transplant period (1 patient) between 2010 and 2019. Structural ultrasound of the transplanted kidney was performed and renal Doppler parameters were measured before biopsy. De novo TMA was diagnosed in 4 patients while 1 patient had TMA as presentation of humoral rejection.
Results: RI on segmental arteries was 1 in all 5 patients. The reversal of diastolic flow was observed in 3 out of 5. In contrast to renal venous thrombosis all patients had normal colour Doppler venous signal.
Conclusion: In all patients with TMA RI was 1 and 3 out of 5 had reversal of arterial diastolic flow, which is otherwise typical finding for renal venous thrombosis. This possibility can be excluded by a normal colour Doppler venous signal. In comparison with our previous study of 20 patients with allograft dysfunction after renal transplantation, RI was also significantly elevated in ATN - 0.95 (± 0.08) and humoral rejection- 0.92 (± 0.11), but the reversal of diastolic flow in segmental arteries was never observed in these two diagnoses. The latter phenomenon with high RI might therefore be specific to TMA if venous occlusion is excluded.

PO355 INTRAOPERATIVE FLOW MEASUREMENT USED TO OPTIMISE GRAFT POSITION IN KIDNEY TRANSPLANTATION

Mauricio Sainz Barriga[1], Maarten Naesens[2], Nicholas Gilbo[1], Julie De Beule[1], Thomas Douchy[1], Diethard Monbaliu[1], Ina Jochmans[1], Ben Sprangers[2], Dirk Kuypers[2], Jacques Pirenne[1]
[1]Abdominal Transplantation Department, UZ Leuven; [2]Nephrology and Renal Transplantation Department, UZ Leuven

Aim & methods: The incidence of immediate postoperative doppler (DUS) abnormalities requiring surgical revision of kidney transplant (KT) patients is 2%. We present a case of a patient reoperated 3 days after KT and the flows of 11 consecutive KT used to select the best position of the graft.
Results: A patient underwent a standard KT. Immediate postoperative DUS showed tardus parvus waveform of the renal artery. An angio-CT scan was unremarkable. Nevertheless, the patient had a surgical revision on postoperative day 3 due to persistent decreased urine output, increase in creatinine and abnormal DUS. At revision, the kidney graft did not show any macroscopic abnormalities. On the contrary, transit-time flow measurement (TTFM) was compatible with preoperative DUS results showing tardus parvus flow morphology (fig. A1, A2). Correction of the position of the kidney in the extraperitoneal space showed an increase of flows from 143 to 401 ml/min and a change of the flow curve morphology (fig. B1). Postoperative duplex ultrasound confirmed the improvement with normal DUS (figure B2). As well, urine output increased and creatinine decreased immediately after surgical revision. In 11 consecutive KT patients we used TTFM to decide the definitive position of the kidney graft. Respecting the longitudinal axis of the iliac vessels, the kidney pelvis was placed either medial or lateral while the renal graft flows

were continuously measured. The kidney was definitively placed in the position where the flows were higher. Accordingly, a significant increase of flows was observed from 329 ± 151 ml/min to 449 ± 212 ml/min, $p = 0.0028$. This represents an increase of 137 ± 19%.
Conclusions: Our results demonstrate a significant increase of renal graft flows according to the definitive positioning in the retroperitoneal space. Intraoperative TTFM provides fundamental information that might escape the eye and hand of the surgeon with the potential to improve outcome.



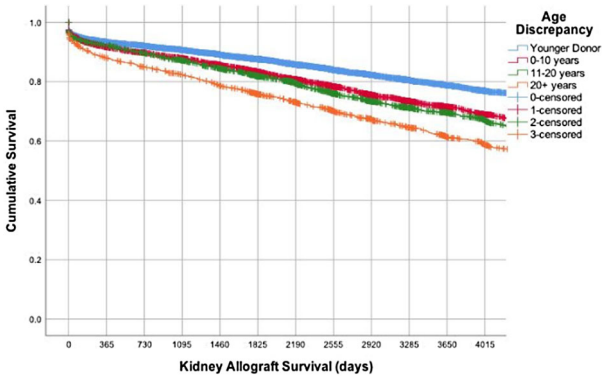
PO357 THE IMPACT OF DONOR AND RECIPIENT AGE DISCREPANCY ON THE OUTCOME OF FIRST CADAVERIC KIDNEY TRANSPLANT IN ADULTS

Georgios Vrakas[1], Annemarie Weissenbacher[2], Peter Friend[2]
[1]Oxford University Hospitals; [2]Oxford University Hospitals NHS Foundation Trust

Background: The number of kidney transplants has risen rapidly in the United Kingdom over the past 25 years, with 3,300 kidney transplants performed in 2018 only. The donor pool has expanded significantly, and more marginal organs are utilised.
Methods/Materials: This review reports the outcomes of first cadaveric renal transplants in adults in the United Kingdom from 1998 till 2013. UK Transplant Registry data on 17,636 renal transplants performed between 1 January 1998 and 31 December 2013 were analysed.
Results: nine thousand five hundred thirty recipients received their transplant from a younger donor, 4,413 recipients received a kidney transplant from an up to 10 years older donor, 2,445 recipients received a kidney transplant from a 11–20 years older donor and 1,248 recipients from a more than 20 years older donor. The median recipient age in the younger donor group was 59 years (range 18–83), 54 years (range 18–77) in the up to 10 years group, 46 years (range 18–69) in the 11- 20 years group and 34.5 years in the more than 20 years group (range 18–59).

The Kaplan Meier curve showed that recipients of kidney transplants from older donors up to 20 years have similar results in terms of allograft survival. (5-year survival for 0–10 years vs. 11–20 years older donor: 81% vs. 79% respectively, $p = 0.84$). Five-year survival for the more than 20 years older donor group was 73%.

Dialysis at the time of transplant, delayed graft function and donor age remained statistically significant in the multivariate analysis.
Conclusion: Despite inferior graft survival in the more than 20-year older donor group, allograft survival remains reasonable at 5 years and therefore, these donors should be considered for transplantation given the superior patient survival compared to dialysis.



PO359 SURGICAL TECHNIQUE OF THE FIFTH KIDNEY RETRANSPLANTATION FROM A LIVING DONOR USING TEXTILE VASCULAR PROSTHESIS TO REPLACE DEMAGED RECIPIENTS LEFT ILIAC ARTERY

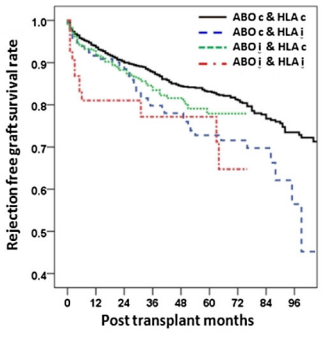
Stefan Hulik, Erik Tóth, Diana Tomasurova, Rastislav Kalanin, Zuzka Lukacova, Tomas Gajdzik, Tatiana Baltesova, Luboslav Bena, Janka Kaťuchová, Jozef Radonak
University hospital of L.Pasteur of Kosice

In our case study, we would like to describe and demonstrate the complexity of the extremely chalenging procedure successfuly performed in our institution in the year 2016, including perioperative management, complications management, and the period of 3 years follow-up after transplantation with very good outcome.

PO360 IMPACT OF INFECTIOUS COMPLICATIONS ON ANTIBODY-MEDIATED REJECTION AFTER ABO-INCOMPATIBLE KIDNEY TRANSPLANTATIONS

Hyunwook Kwon[1], Young Hoon Kim[2], Dong Hyun Kim[2], Youngmin Ko[2], Joo Hee Jung[2], Duck Jong Han[2]
[1]Asan Medical Center, University of Ulsan College of Medicine; [2]Asan medical center

Objectives: This study evaluated the impact of infectious complications on the clinical outcomes of ABO and HLA-incompatible kidney transplantation (HLAi KT).
Methods: A total of 1,732 patients who received a living donor KT in the period from January 2009 to January 2018 at Asan Medical Center were retrospectively reviewed. The study cohort consisted of four groups according to ABO and HLA status: ABO and HLA-compatible (ABOc & HLAc) ($n = 1,190$), ABOc & HLAi ($n = 131$), ABOi & HLAc ($n = 358$), and ABOi & HLAi ($n = 53$).
Results: The ABOi & HALi group showed a significantly lower patient survival rate than the other three groups ($p < 0.01$). Death-censored graft survival showed no significant differences among the four groups ($p = 0.94$). The rejection-free graft survival rates (RFGS) were significantly lower in the ABOc & HLAi and ABOi & HLAi groups than the ABOc & HLAc group ($p < 0.01$). The ABOi & HLAc group showed lower antibody-mediated RFGS rates than the ABOc & HLAc group ($p = 0.03$). The ABOi & HLAi groups also showed poorer antibody-mediated RFGS and ABOc & HLAi KT ($p = 0.03$). Overall infectious complications, including cytomegalovirus, BK virus, urinary tract infection, pneumonia, and other viral infections, occurred more frequently in the ABOi & HLAi group across the four groups (58.5%, $p < 0.01$). In multivariate analyses, overall infectious complications and ABO and HLA incompatibility were significant risk factors of acute antibody-mediated rejection (ABMR) (hazard ratio, 1.75, 3.83; $p < 0.01$).
Conclusion: ABOi KT showed successful graft outcomes compared with ABO c KT. However, the ABMR rate was significantly higher in ABOi KT during long-term follow-up. Infectious events after KT was one of the prominent risk factors associated with ABMR. ABOi KT in patients with HLAi KT may have synergic effects in ABMR after transplants.



	ABO c & HLA c	ABO c & HLA i	ABO i & HLA c	ABO i & HLA i
1yr	93.6% (1105)	91.6% (120)	91.9% (273)	81.0% (34)
3yr	87.7% (822)	79.8% (90)	83.5% (149)	77.1% (20)
5yr	83.1% (523)	72.8% (62)	77.9% (55)	77.1% (14)

ABO c & HLA c vs. ABO c & HLA i : P< 0.01
ABO c & HLA c vs. ABO i & HLA i : P< 0.01
ABO c & HLA c vs. ABO i & HLA c : P= 0.10
ABO i & HLA c vs. ABO i & HLA i : P= 0.07
ABO c & HLA i vs. ABO i & HLA i : P= 0.09

PO364 THE DEGREE OF ACCEPTANCE OF THE DONATION PROGRAMME IN DONATION AFTER CIRCULATORY DEATH IN A TERTIARY LEVEL UNIVERSITY HOSPITAL WITH A TRANSPLANT PROGRAMME

Martinez Esther[1], Camino Rodriguez[2], Oscar Buisan[3], Ramon Adalia[4], Jose Manciño[1], Enrique Moret[1]
[1]Hospital Universitari Germans Trias i Pujol; [2]Clinic Hospita; [3]University Hospital German Trias i Pujol; [4]Clinic Hospital

Introduction: Identification of potential donors and the acquisition of organs is necessary to have sound knowledge of the limitation measures of life support (LSTL) for critically ill patients, to have bioethics and also good knowledge of the processes of Donation after Circulatory Death (DCD)
Objective: To determine the level of knowledge and acceptance of the LSTL measures and of the DCD of the work teamin a Tertiary Level Hospital with a Transplant programme.
Methodology: A 4-phase study was carried out. 1°:designing of a survey that participate. 2°: validation of the sureveysurveyto the Delphi method. 3° phase: informative sessions. In fourth phase, a descriptive study was conducted
Results: An 89% participation was achieved.

Knowledge of LSTL was high in 35.7%, in bioethics: 14.3% and in DCD: 39.8%.
Knowledge of bioethics increased with age and knowledge of DCD reached a maximum of 45.7%: OTCshowed increased knowledge in LSTL and bioethics but less knowledge in DCD (14.3% v 41.8%).

A univariate analysis to identify, the predictive factors of higher knowledge of LSTL, age group and years worked (OR = 1.86; *p*: 0.012 and OR = 2.07; *p*: 0.008) the knowledge of bioethics, age, gender and being an OTC; the results were significant in the univariate and multivariate analysis (OR = 2.36; *p* 0.03; OR = 0.23; *p* 0.03 ; OR = 0.14; *p* 0.045).

Level of studies was shown to be statistically significantly (OR = 2.72; *p* 0.029).
Conclusions: Woman, older and being an OTC predicts better knowledge of bioethics, while only the level of studies (doctors v nurses) predicts higher knowledge of DCD.

Training measures should be established for those subgroups which do not have high knowledge of the 3 areas, and in that way impro

PO365 DIFFERENCES IN SUN HABITS AND SUN BEHAVIOR BETWEEN ORGAN TRANSPLANT RECIPIENTS AND NON- ORGAN TRANSPLANT RECIPIENTS. A QUESTIONNAIRE BASED-SURVEY

Caroline Stenman
Sahlgrenska University Hospital

Background: Organ transplant recipients (OTRs) have an increased risk of developing skin cancer, caused by immunosuppressive medications.

The risk of developing SCC in OTRs is 60 to 100 times greater compared to the non-organ transplant recipients (non-OTRs).

All patients who underwent transplantation at Sahlgrenska University Hospital (SUH) in Gothenburg, Sweden received oral and written information about their increased risk of developing skin cancer and importance of sun protection since 1994.

The aim of this observational study was to investigate sun habits and sun protection behavior amongst OTRs and compare them with non- organtransplant recipients (non-OTRs.)
Methods: In total, 696 patients were included in the study. A questionnaire consisted of more than 30 questions addressing sun habits, readiness to change sun protection behavior and attitudes towards sunbathing was used to assess sun habits and sun protection behavior in OTRs (n = 282) compared to non-OTRs (n = 414).
Results: Sunburnt in the last year was significantly lower in OTRs 20% (95% CI: 15–25) compared with 46% (95% CI: 41–51) ($p < 0.0001$) in non-OTRs. When comparing scores regarding stay in the sun between 11 am and 3 pm, during a typical day-off in the summer (June-Aug) between groups we found a significantly longer time spent in the sun in non-OTRs compared with OTRs ($p < 0.0001$). Ranking to get tanned during the summer was assessed as not important in 32% (95%CI: 27–38) OTRs compared with 15% (95% CI: 12–19), ($p < 0.0001$), in non-OTRs. OTRs were better in protection from sun by using covering clothes, sunhat, cap or similar and staying in the shade than non-OTRs ($p < 0.0001$).
Conclusion: In the present study we found that OTRs at SUH were aware of their increased risk of developing skin cancer and they have healthier sun habits and sun protection behavior compared to non-OTRs. The usage of oral and written information on su

PO366 FACTORS RELATED TO POST-KIDNEY TRANSPLANT MALIGNANCIES, INCLUDING THE DOSIMETRY HISTORY

Saulo Fernández Granados, Rita Guerra Rodríguez, Ingrid Auyanet Saavedra, Ana Ramírez Puga, Ernesto Fernández Tagarro, Noemí Esparza Martín, Ana Cristina Ródenas Galvez, Selene González, César García Cantón
Hospital Universitario Insular de Gran Canaria

Background: The recipients of solid-organ transplants have a high incidence of malignancies. There is evidence for an association between the degree of immunosuppression and the risk of getting cancer, but other factors come into play. It is unclear whether the radiation exposure from imaging tests could increase the risk of developing cancer. The aim of this study was to examine the incidence and the risk factors of cancer on renal transplant recipients (RTR) at a transplant center in the Canary Islands.
Methods/Materials: Descriptive and retrospective study including our RTR who received the kidney transplant during the period from 2007 to 2016 and developed post–kidney transplant malignancies (PKTM): solid organ malignancy (SOM), post-transplant lymphoproliferative disease (PTLD) and non-melanoma skin cancer (NMSC).
Results: Of the 160 patients studied, the 15.6% developed a PKTM. The average time of malignancy occurrence was 3.37 ± 2.12 years after kidney transplantation. The mean age at the time of cancer diagnosis was 53.9 ± 10.2 years. The percentage of NMSC, SOM and PTLD were 10%, 5% and 0.6%, respectively. The most common SOM were malignancies of bladder (25%) and head neck cancer (25%). Risk factors include tabacco (OR, 2.74; $p = 0.03$) and male gender (OR, 3.79; $p = 0.033$). Other risk factors (such as recipient age, duration of dialysis, induction therapy, etc.) were not significant. PKTM was the cause of death in 12% patients. The average dose of ionizing radiation was 21.062 ± 14.55 mSv, over the previous 5 years before cancer diagnosis. When comparing the dose of radiation in NMSC (18.42 ± 10.80 mSv) with SOC (27.96 ± 19.53 mSv), were not significant (this may be due to the sample size).
Conclusion: The RTR have specific risk factors of PKTM. Among them is dosimetry history, where the risk of SOM tends to be higher than NMSC. It may be of relevance studies to analyse the contribution of dosimetry history in the already known multifactorial etiology of PKTM.

PO367 IMPACT OF FULL CORRECTION OF POST-TRANSPLANT ANEMIA ON CARDIOVASCULAR SYSTEM AND QUALITY OF LIFE IN RENAL TRANSPLANT RECIPIENTS RECEIVING ERYTHROPOIETIN STIMULATING AGENTS: PROSPECTIVE RANDOMIZED CONTROLLED TRIAL

Torki Al-Otaibi[1], Medhat A. Halim[1], Osama Gheith[2], Ayman M. Najeeb[1], Hasanein Abo-Atteya[1], Tarek Mahmoud[1], Prasad Nair[1], Yahya Makkeya[1], Ahmed Fathy[1], Mohamed Balaha[1], Mohamed Abdul-Hameed[1], Suzann Rida[1], Nabil Alserwy[1], Naryanam Nampoory[1]
[1]OTC Kuwait; [2]MUNC

Objectives and aim: Whether full correction of post-transplant anemia (PTA) improves renal outcomes is unknown. We aimed to assess the impact of full correction of PTA on cardiovascular system and quality of life in stable renal transplants using optimized erythropoietin stimulating agents (ESA).
Patient and methods: We enrolled 247 kidney recipients with stable graft function to be assessed for anemia. Eligible patients were randomized to achieve target hemoglobin between 11:12 g/dl (group 1, n = 183), or 13:15 g/dl (in group 2, n = 64) using ESA. Monthly clinical and laboratory evaluation of kidney graft function was carried out. Moreover, quality of life and echocardiography were assessed at the start and 12 months.
Results: More females were found in group 1 (68.9%) vs. (50%) in group 2 ($p = 0.007$), and the original disease was chronic glomerulonephritis (37.5%) followed by diabetic nephropathy (DN) (15.7%) in group 2; but DN patients predominated in group 1 ($p = 0.005$). Both groups were comparable regarding pre-transplant co-morbidities. Most patients received thymoglobulin and most of them were maintained on cyclosporine. We did not find any significant difference between the two groups concerning post-transplant diabetes, BK viremia, malignancies, cardiovascular (CVS) events ($p > 0.05$). After one year, better graft function was observed in group 2 at 6 months ($p < 0.05$). Only, group 1 showed higher mean blood pressure ($p = 0.003$), lower LV internal dimensions, higher LVH, LV mass, IVSD and LV mass index ($p < 0.05$). Also, the assessment of QoL using the Medical Outcomes Study 36-Item Short-Form Health Survey, quality of life as represented by physical activity was improving in group 2. Graft outcome was comparable in both groups ($p = 0.125$), but mortality cases were significantly higher in group 1 (16 cases, 8.7%) ($p = 0.005$).
Conclusion: Full correction of PTA was associated with better survival, graft function, quality of life without CVS events.

PO368 EFFECT OF FLUVASTATIN ON CARDIOVASCULAR COMPLICATIONS IN KIDNEY TRANSPLANTATION PATIENTS: A SYSTEMIC REVIEW AND META-ANALYSIS

Seon Deok Hwang[1], Jin Ho Lee[2], Joon Ho Song[3], Yoon Ji Kim[4], Joong Kyung Kim[2], Seoung Woo Lee[3]

[1]Inha University College of Medicine, Incheon; [2]Division of Nephrology, Department of Internal Medicine, Bong Seng Memorial Hospital, Busan, Korea; [3]Inha University College of Medicine, Incheon; [4]Division of Endocrinology, Department of Internal Medicine, Mediplex Sejong Hospital , Incheon, Korea

Introduction: Hyperlipidemia and cardiovascular disease are risk factors for long-term renal transplant dysfunction. However, no meta-analyses of randomized controlled trials have investigated the effects of statin treatment on graft function in renal transplant recipients. The aim of the present study was thus to evaluate the effects of statin use on renal transplant patients using a meta-analysis approach.
Methods: We conducted a systematic review and meta-analysis using random-effects modeling. We searched the following databases for all studies published through to June 15, 2018: Cochrane Central Register, OVID MEDLINE, EMBASE, and PubMed. We reviewed all relevant reviews, registered trials, and relevant conference proceedings to compare clinical outcomes and survival between fluvastatin recipients and controls.
Results: Five trials with a total of 3,725 patients were included. Glomerular filtration rates, graft loss, tacrolimus level, antibody mediated rejection, T-cell mediated rejection, proteinuria, fungal infection (candida), and patient survival rates did not differ between the fluvastatin and control groups. However, 1.547 times more major adverse cardiovascular events (MACEs) in the control group than in the fluvastatin group were observed ($p = 0.001$).
Conclusions: Fluvastatin use was associated with a reduction in MACEs among kidney transplantation patients.

PO369 IMPACT OF INHIBITION OF PCSK-9 AMONG RENAL TRANSPLANT RECIPIENTS WITH HIGH CARDIOVASCULAR RISK

Osama Gheith[1], Torki Elotaibi[2], Hasaneen Abo-Atteya[2], Ayman M. Najeeb[2], Tarek Saed[2], Medhat A. Halim[2], Mohamed Balha[2], Khalid Abdul-Tawaab[2], Mohamed Abdul-Hameed[2], Nabil Elserwy[2], Ahmed Sami[2], Prasad Nair[2]

[1]MUNC; [2]OTC kuwait

Introduction: Reduction of LDL cholesterol levels are associated with reduction of major cardiovascular events. Monoclonal antibodies inhibiting proprotein convertase subtilisin/kexin type A (PCSK-9) have emerged as one of class of new cholesterol lowering agent. Evolocumab achieved nearly 60 % reduction in LDL cholesterol levels. It is not evaluated among renal transplant recipients despite its favourable safety profile.
Aim of the study: To evaluate the safety and efficacy of evolocumab in reducing lipids and cardiovascular events among renal transplant recipients.
Patients and methods: Seventy-five kidney transplant recipients- who were followed up in Hamed Al-Essa organ transplant center with high cardiovascular risk (>20)-were enrolled in this observational study during the period between 11.2017 and 5.2018. Patients who received evolocumab (140 mg/ 2 weeks) comprised group 1 ($n = 25$) while those who were maintained on statin therapy comprised group 2 ($n = 50$). The 2 groups were compared regarding their demographics and post-transplant complications. Lipid profile and cardiovascular events were assessed along 6 months.
Results: The 2 groups were comparable regarding their demographic data except significantly younger patients 55.7 ± 12 years in group 1 vs. 66.4 ± 8.3 years. Also, pre-transplant co-morbidities were similar in both groups ($p > 0.05$). Moreover, graft function and type of immunosuppression were equivalent in both groups ($p > 0.05$). Before enrollment in the study, post-transplant complications were comparable apart from higher prevalence of PTDM in group 2 ($p = 0.033$). Associated medications (as fibrates, omega 3 fatty acids, anti-platelets) were analogous in the 2 groups ($p > 0.05$). we found significantly higher cholesterol in group 1 (5.3 vs. 4.3, $p < 0.001$) but it became significantly lower in the same group compared to group 2 after 6 months (3.6 vs

PO370 APPROACHES TO THE DIAGNOSIS AND MANAGEMENT OF ACUTE ANTIBODY-MEDIATED REJECTION IN KIDNEY TRANSPLANT PATIENTS, FINDINGS FROM A MULTINATIONAL (EUROPE AND USA) CHART REVIEW

Ishan Hirji[1], Shelby Corman[2], Emily S. Brouwer[1], Tien Bo[1], Sang Hee Park[2], Cynthia Macahilig[3], Andrea Vergani[1], Peter Wolthoff[3], Paul Keown[4]

[1]Shire, a Takeda company; [2]Pharmerit International; [3]Medical Data Analytics; [4]University of British Columbia

Background: The burden of acute antibody-mediated rejection (aAMR) remains high and optimal management protocols lack consistency.
Materials/Methods: This retrospective chart review aimed to describe real-world clinical data systematically to provide insights into diagnosis, treatment and management of patients with aAMR post kidney transplant. Medical charts of patients ≥ 18 years with their first aAMR episode within 1 year after kidney transplant (2010–2015) in France, Germany, Italy, Spain, UK and USA were reviewed. aAMR was defined as the presence of donor-specific antibodies (DSAs) and renal allograft biopsy demonstrating neutrophil and/or monocyte infiltration in the peritubular capillaries and/or glomeruli with/without immunohistopathology evidence of C4d. Data were analyzed descriptively.
Results: Data from 626 patients were evaluated; mean (SD) age was 49 (13.3) years and was similar across countries. Overall, median time to aAMR diagnosis was 62 days; shortest in Germany, 11 days; longest in Italy, 109 days. Diagnostic methods included: biopsy+DSA (57.2%) and biopsy only (41.5%). 86.7% of patients received ≥ 1 aAMR pharmacotherapy. Intravenous immunoglobulin (IVIg)-based regimens comprised the most common treatment approach; differences in the combinations used were observed among countries. Highest use of IVIg+plasmapheresis was reported in USA (37.3%) and France (34.1%). IVIg alone was highest in USA (24.9%) and lowest in Spain (1.8%). Use of rituximab-based regimens ranged from 1.5% (UK, with IVIg) to 60% (Italy, 30% monotherapy, 30% with IVIg). Numerous other regimens (pharmacologic and non-pharmacologic) were reported as primary aAMR treatment. Non-pharmacologic AMR management was most common in Spain (25.7%).
Conclusion: Real-world data from kidney transplant recipients with aAMR confirmed variability within and across countries, reflecting the need for a well controlled trial to establish efficacy against currently available treatment options.

PO371 PREVALENCE OF LATENT TUBERCULOSIS AND TREATMENT COMPLIANCE AMONG HEALTH CARE WORKERS WORKING IN ORGAN TRANSPLANT UNITS IN AN INTERMEDIATE TUBERCULOSIS BURDEN COUNTRY

Jill Kim[1], Youn Jeong Kim[2], Sang Il Kim[2]

[1]Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea; [2]Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea

Introduction: Solid organ transplant (SOT) recipients consider a high risk group for tuberculosis, therefore the health care workers (HCW) in organ transplant units have increased risk of exposure tuberculosis. Screening and treatment of latent tuberculosis (LTBI) is one of methods to decrease tuberculosis transmission in health care settings. This study was estimated prevalence of LTBI among HCWs working in SOT units and compliance of LTBI treatment.
Methods: Among 4,321 HCWs who performed QuantiFERON-TB Gold for LTBI screening in 2017, 177 HCWs were working in SOT units. HCWs with positive QuantiFERON-TB Gold result were recommended to meet infectious disease specialist by Infection prevention and control department of hospital, and offered LTBI treatment.
Results: Among a total of 177 HCWs in SOT units, 34 (19.2 %) had positive QuantiFERON-TB Gold results whereas 18.5% (766/4,144) had positive results in HCWs working in other center ($p = 0.91$). Positive QuantiFERON-TB Gold results in SOT units was estimated 2.9% in twenties, 14.0% in thirties, 46.9% in forties, 44.4% in fifties and 100% in sixties. Among 31 HCWs without history of previous tuberculosis, only 54.8%($n = 17$) of HCWs met infectious disease doctor, and 14 (82.3 %) accepted LTBI treatment. Physicians (33.3%, 7/21) were less likely to accept treatment than other HCWs (nurses: 85.7%, 6/7, nurse aid: 66.6%, 2/3). No HCWs complained drug side effect.
Conclusion: Our data showed the LTBI prevalence among HCWs working in SOT units were 19.2%, and was not different from HCWs working other units. LTBI was increasing tendency by age. Physicians in SOT units were less likely to accept treatment than other HCWs, and this finding suggests effort to enhance LTBI treatment acceptance among physicians will be needed.

PO372 MYCOBACTERIUM TUBERCULOSIS INFECTION IN LIVER TRANSPLANT RECIPIENTS IN AN INTERMEDIATE TUBERCULOSIS-ENDEMIC AREA

Youn Jeong Kim[1], Jong Young Choi[1], Seung Kyu Yoon[1], Ji Il Kim[2], Yung Kyung Yoo[2], Dong Goo Kim[2], Sang Il Kim[3]

[1]Department of Internal Medicine, College of Medicine, The Catholic University of Korea; [2]Department of Surgery, College of Medicine, The Catholic University of Korea; [3]The Catholic University of Korea

Background: Solid organ transplant recipients are considered a high risk group for Mycobacterium tuberculosis (TB). TB treatment especially in liver transplant recipients is difficult due to hepatic toxicity and drug interactions. The aim of this study was to investigate the frequency, clinical characteristics and outcomes of TB among liver transplant recipients
Methods: We retrospectively analyzed all TB cases among 948 subjects who had undergone liver transplantation between January 2001 to December 2016.

Results: A total of 21 (2.2%) liver transplant recipients (15 male, 6 female) with mean age of 60 ± 8.2 years old were treated with TB, among them, 3 cases detected TB at the time of LDLT. Five recipients had history of tuberculosis. The mean time after transplantation to TB diagnosis was 1,494 ± 1,535 days, and 7 cases (33.3%) were developed active TB within 1 year of transplantation. Sixteen cases were diagnosed as having confirmed TB (13 culture and 3 PCR) and 5 as probable TB. Six cases (28.5%) had disseminated infection, and 13 cases (61.9%) displayed pulmonary TB. Among 13 cultivated TB, 2 (15.3%) had resistant to isoniazid. Fifteen patients (71.4%) complained of side effect, and 7 patients interruped TB medication due to hepatotoxicity. Overall mortality was 9.5% ($n = 2$), however none was associated with TB.
Conclusion: TB in liver transplant recipients is frequently presented as disseminated disease and side effect such as hepatotoxicity is significant problem in liver transplant recipients during TB treatment.

PO373 SUCCESSFULLY TREATED MDR PSEUDOMONAS INDUCED SKULL BASE OSTEOMYELITIS IN RENAL TRANSPLANT RECIPIENT: CASE REPORT AND REVIEW OF LITERATURE

Osama Gheith[1], Ahmed Sami[2], Ayman Najeeb[2], Tarek Mahmoud[2], Prasad Nair[2], Hasanein Abo-Atteya[2], Torki Al-Otaibi[2], Ehab Abdul-Nabi[2], Sohair Mohammd[2]
[1]MUNC; [2]OTC kuwait

Objectives and aim: Skull base osteomyelitis (SBO) is a rare serious disorder that typically begins as malignant otitis externa.we report successfully treated renal transplant who developed relapsing SBO due to multi-drug resistant (MDR) pseudomonas infection which was complicated with meningitis and thrombosis of the lateral sinus.
Case report: A 61-year-old male ESRD secondary to diabetic nephropathy underwent kideny transplant on 3.10.2017. His MDR pseudomonus aerogenosa wound infection was managed by colomycin for 14 days beside. He was re-admitted for treatment of MDR pseudomonas that was isolated from urine and blood with meropenem and colomycin. He developed left ophthalmic neuralgia. His skull MRI on (4.4.2018) showed left occipital and mastoid osteolysis, partially thrombosed left internal jugular vein and left lateral sinus; and left temporal meningeal contrast enchancement. He was diagnosed as MDR pseudomonas osteomyelitis of the skull base associated with partial jugular thrombosis for which he received a course of combined colymicin, fosfomycin and cloxacillin (6 weeks) with good reponse. On 24.6.18, he was re-admitted to our center with fever, facial pain, headache, vomiting and convulsions. He was supported by Keppra and planned to repeat brain MRI, lumber puncture and to treat his septic condition. We considered as relapsing osteomylitis of the skull base and we resumed the same antibiotic regimen together with holding his maintenance immunosuppression except steroid for nearly 6 weeks and after that tacrolimus was resumed gradually. He is still have mild intermittent headache with some postural hypotension possibly due to diabetic autonomic neuropathy.
Conclusion: SBO among renal transplant will need prolonged course of antibiotics together with minimization of immunosuppression to prevent its relapse especially if it is due to MDR paeudomonas infection.

PO374 IMPACT OF MANAGEMENT OF BK VIRUS NEPHROPATHY IN RENAL TRANSPLANT RECIPIENTS: SINGLE CENTER EXPERIENCE

Osama Gheith[1], Medhat A. Halim[2], Ayman Najeeb[2], Yahya Makkeya[2], Torki Al-Otaibi[2]
[1]MUNC; [2]OTC Kuwait

Objectives: The prevalence of BK-induced nephritis in renal transplant recipients is estimated to be 1 to 10 %; rate of graft loss within one year is 30 to 65%. We conducted this study to evaluate screening of BK virus in blood and or urine among renal transplant recipients and to assess the impact of different therapeutic modalities in renal transplant recipients with BK Nephropathy.
Patient and methods: Mass screening for all kidney transplant recipients at the time of transplant and then 1, 2, 3, 6, 9, 12, 18, and 24 months. Fifty nine patients were diagnosed to have BKV viremia and were divided into 2 groups according to the management: group 1 ($n = 29$) patients received an active treatment and group 2 ($n = 30$) patients received minimized immunosuppression.
Results: Most of the patients were subjected to graft biopsies to confirm the diagnosis (86.2% in group 1 vs. 50% in group 2, $p = 0.03$). Both groups were comparable regarding demographic data.Initial post-transplant graft function was significantly better in group 1 ($p = 0.017$), ultimately there was no significant difference between both groups regarding graft survival ($p = 0.51$). Fifty percent of patients had biopsy-proven acute T cell mediated rejection before BKVAN diagnosis, which were significantly higher in group 1. Serum creatinine follow up were significantly better in group 2 at 3 0.4 and 5 years after BK nephropathy ($p = 0.001$, 0.017 and 0.003 respectively).
Conclusion: The prevalence of BK nephropathy in our renal transplant recipients was 5.9% with a rate of graft loss ranged between 43 to 51%. Regular screening, less intensive immunosuppressive therapy, and early intervention by reduction of immunosuppressive medications are advisable to obtain early diagnosis and to have better outcome of BKVAN compared to different anti-BK virus agents.

PO375 EFFECTIVENESS OF ANTITHYMOCYTE GLOBULIN INDUCTION DOSING REGIMENS IN KIDNEY TRANSPLANTATION PATIENTS: A NETWORK META-ANALYSIS

Seon Deok Hwang[1], Joon Ho Song[2], Jin Ho Lee[3], Jong Hyun Jhee[2], Seoung Woo Lee[2]
[1]Inha University College of Medicine, Incheon; [2]Division of Nephrology and Hypertension, Department of Internal Medicine, Inha University College of Medicine, Incheon, Korea; [3]Divison of Nephrology, Department of Internal Medicine, Bong Seng Memorial Hospital, Busan, Korea

Background: Antithymocyte globulin (ATG) is an induction therapy in kidney transplantation, but our knowledge about the relation between outcomes and ATG regimens is limited. We compared ATG effectiveness in kidney transplantation according to dosage and administration schedule.
Methods: Reports from 1970 until May 2018 in CENTRAL, MEDLINE, EMBASE, and Science Citation Index Expanded were searched. We performed direct and indirect network meta-analysis using Bayesian models and generated rankings for ATG dosage and injection number variations by GeMTC (generation mixed treatment comparison).We compared ATG dose and schedule in kidney transplantation in relation to all-cause death, graft failure, antibody-mediated rejection, T-cell mediated rejection, biopsy-proven acute rejection, and bacterial and viral infection.
Results: Ten studies ($N = 1,065$) were analyzed by forming six groups: ATG alternatedoses,9 mg/kg, 6 mg/kg, and 4.5 mg/kg; single dose,6 mg/kg and 4.5 mg/kg; and control. Compared with placebo, ATG regimen variations were not associated with significant differences in survival, viral infection, renal function, and graft survival. ATG regimens9and 4.5 mg/alternate dosing trended toward reducing biopsy-proven acute rejection but without statistical significance. According to the highest rank probability, the 9 mg/alternate dosing group had the highest tendency for CMV and bacterial infections but without statistical significance.
Conclusions: The rejection frequency tended to be lower for the 9and 4.5 mg/alternate dosing groups. Infections occurred at a higher rate in the 9 mg/alternate dosing group, but the differences in the risk for infection among the groups with different ATG regimens were not statistically significant

PO376 IMPACT OF THE PRE-TRANSPLANT DIALYSIS MODALITY ON KIDNEY TRANSPLANTATION OUTCOMES

Osama Gheith[1], Mohamed Emam[2], Torki Al-Otaibi[2], Prasad Nair[2], Medhat A. Halim[2], Tarek Mahmoud[2], Mohamed Zahab[2], Khalid Abdul-Tawaab[2]
[1]MUNC; [2]OTC kuwait

Introduction: Most patients with uremia must undergo chronic dialysis while awaiting kidney transplantation; however, the role of the pretransplant dialysis modality on the outcomes of kidney transplantation remains obscure.
Aim of the study: To evaluated the impact of pre-transplant dialysis modality, hemodialysis (HD) or peritoneal dialysis (PD) on the outcome of renal transplant.
Patients and methods: Database of our renal transplant recipients in Hamed Al-Essa organ transplant center were retrospectively analyzed. There were 2,089 patients included in our study, and were categorized according to type of pre-transplant dialysis into group 1 (HD, $n = 1,799$, 86.1%) and group 2 (PD, $n = 290$, 13.9%). The pre-transplant characteristics, complications during kidney transplantation and post-transplant outcomes were statistically analyzed and compared between the HD and PD groups. The primary outcomes were graft lost and patient survival. The secondary outcomes were events during and after transplantation.
Results: Most of patients were males (1,333, 63.8%) in their forties with mean age 40.7 ± 15.4 years. Diabetic nephropathy 77 (26.6%) was the commonest cause of ESKD in group 2 while glomerulonephritis 515 (28.6%) was the commonest in group 2. ($p < 0.001$). Prevalence of pre-transplant hypertension was significantly higher in group 1 while diabetes was more common in group 2 ($p < 0.001$). The two groups were comparable regarding ischemic heart disease and immediate post-transplant graft function ($p > 0.05$). CNI free regimen was used more frequently in group 2 (5.6%). Post-transplant diabetes was more prevalent in group 2 (20%) but post-transplant viral infections and even graft outcome were comparable ($p > 0.05$). However, patient outcome was significantly better in group 1 (6.5% vs. 10.38% mortality, $p < 0.001$).
Conclusions: Pre-transplant PD contributed to higher risks of death when compared with HD possibly due to the higher prevalence of diabetes in that group.

PO377 COMBINED MEMBRANOUS GLOMERULONEPHRITIS AND PLASMA CELL-RICH ACUTE REJECTION PRESENTED AS NEPHROTIC SYNDROME: CASE REPORT AND REVIEW OF LITERATURE

Osama Gheith, Eslam Alsawy, Torki Al-Otaibi, Medhat A. Halim, Prasad Nair
OTC kuwait

Introduction: Regardless of the continuous efforts to reduce the rate of acute rejection episodes and to optimize allograft survival with potent immunosuppressive drugs, the occurrence of more than 10 % of the inflammatory cells infiltrating renal allograft as mature plasma cells is not common and was recognized as plasma cell rich acute rejection (PCAR).
Aim of the work: We describe a case of biopsy-proven combined membranous glomerulonephritis and plasma cell rich acute rejection presented with nephrotic syndrome and mild renal allograft dysfunction.
Case report: A 58-year-old male who was suffering end-stage renal disease secondary to unknown cause. He started hemodialysis for 2.5 years. He underwent overseas living unrelated kidney transplantation with smooth post-operative course. He landed to our center on the 6th day post-operatively. He was admitted to control his diabetes and hypertension. His basal graft ultrasound and renogram were normal. He was investigated urologically for micro-hematuria and he was kept on alpha blocker as a case of SPE. Two years after transplant, he developed edema lower limbs, puffy face, and heavy proteinuria and hypo-albuminemia and hypercholesteremia. His graft biopsy showed membranous GN and PCACR. Bence John's protein, serum electrophoresis, and bone survey all came normal. He received pulse steroid 1 g od for 3 days followed by 30 mg /day for 30 days then gradual tapering till 20 mg per day according to our protocol. CD lymphocyte count showed high CD19 cells, so he received single dose of rituximab. His donor specific antibody came negative. Follow up graft biopsy (3 months later) revealed MGN and complete resolution of plasma cells. His proteinuria started to improve after 4 months of management with stable graft function and controlled DM.
Conclusion: PCAR is treatable form of acute rejection, and its combination with membranous GN will need special care with specific CD20 ablation therapy.

PO378 T CELLS COMMANDS CHIEF ORCHESTRAS FOR POST-TRANSPLANT DIABETES

Torki Al-Otaibi[1], Osama Gheith[2], Mohamed Jahromi[3], Nashwa Othman[3], Prasad Nair[1], Tarek Mahmoud[1], Medhat A. Halim[1], Naryanam Nampoory[1]
[1]OTC Kuwait; [2]MUNC; [3]DDI

Introduction: Post-transplantation diabetes mellitus (PTDM) is a serious metabolic complications of kidney transplantation. Cytokines are are involved in the inflammation of islet β-cells in diabetes; however, their role in the pathogenesis of PTDM is not yet well-established few studies have studied this in PTDM..
Aim of the study: To assessGenetic susceptibility of cytokines to PTDM. through screening of transplants that developed diabetes compared with those who did not.
Patients and methods: A total of 309 renal transplant recipients (RTRs) were included in this study. The association was examined between the development of diabetes in RTRs, a PTDM cohort, compared with those RTRs without diabetes (non-PTDM). We have selected cytokines T cell or macrophage derived cytokines ones with well-stablished functionality in protein levels. Interferon-γ T (+874) A- gene (IFNG) as (ThH1), IL-4 C (-590) T as (THh2), TGF-β1 T (29)C as (THh3) and IL-6 G (−174) C as (macrophage derived). The genes were amplified using well-established techniques in our laboratory. Allelic and genotype frequencies of the latter genes IFNG, IL-4 C (-590)T , TGF-β1 T (29)C and IL-6 G (-174)C were calculated for RTRs with PTDM versus non-PTDM RTRs using SPss SPSS softwareystem.
Results: IFNG TT, which corresponded to high production of IFNG protein was significantly more in PTDM than non-PTDM, $p = 0.005$, while AA, low producer of IFNG, was predominant in the control group ($p = 0.004$) ($p < 0.05$). In IL-4 the CC genotype, which correlated to low production of IL-4 protein level, was more in PTDM than non PTDM, $p = 0.02$, on the other hand TT which corresponds to high producer of IL-4 was more in nnon PTDM than PTDM cohort, $p = 0.003$ ($p < 0.05$). On the other hand, GG of IL6 and TT of TGF-β1 which corresponded to high protein levels of both cytokines were significantly more in PTDM with $p = 0.002$ and $p = 0.03$ respectively.
Conclusion:
Inflammat:

PO379 PREVALENCE OF HYPOVITAMINOSIS D AMONG RENAL TRANSPLANT RECIPIENTS AND ITS RELATION TO GRAFT INTERSTITIAL FIBROSIS

Waleed Awadein[1], Ezzat Mostafa Mohama[2], Fawzy Abdelfattah Almessallamy[1], Ahmed Mohamed Gab-Al[3], Osama Gheith[1]
[1]OTC Kuwait; [2]egypt, zagazig university; [3]zagazig university

Introduction: Vitamin D deficiency is not uncommon among kidney transplant recipients which may lead bone diseases, graft aging and vascular disease.
Aim of the work: We aimed to evaluate the prevalence of hypovitaminosis D among renal transplant recipients and its relation to graft interstial fibrosis in graft biopsies.
Patients and methods: We recruited 99 renal transplant recipients with recent graft biopsies performed during the period between 2016 and 2017. We excluded 2nd transplants, previous rejecters, extremes of ages (<18, >70 years), postmenopausal women, and conditions that interfered with vitamin D metabolism as hepatic disease, gastric bypass, cystic fibrosis; extensive burns and chronic diarrhea. Patients were divided the into two groups: recent transplants (<1-year post-transplant, $n = 49$) and older transplants (>1- year post-transplant, $n = 50$). We measured serum 25 (OH) vitamin D, iPTH, albumin, creatinine, calcium, phosphorus, cholesterol and uric acid. Graft biopsies were assessed according to Banff classification 2013.
Results: Most of patients (81.8%) had hypovitaminosis D with variable degrees deficiency (48.5 % had insufficiency, 24.2 % had mild deficiency, and 9.1 % had severe deficiency). In our study, both groups were comparable regarding their demographic data except longer dialysis duration and higher number of patients receiving tacrolimus-based therapy in group 1. Vitamin D level was lower in group 1 but did not rank to significance ($p > 0.05$), however, it had significant negative correlation with iPTH and the degree of renal graft interstitial fibrosis and vitamin D deficiency.
Conclusion: The prevalence of 25-OH vitamin D deficiency is high post-transplant and it might contribute to the graft interstitial fibrosis.