POSTERS

Kidney – Pancreas

P1-0015 KIDNEY TRANSPLANTATION IN TWIN MONOZYGOUS BROTHERS CARRYING G1/G2 POLYMORPHISM OF APOL1

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Introduction: Afro american patients with APOL1 polymorphism are more likely to develop ESKD. Little is known about renal prognosis in donors after living kidney donation in such population. We present here the first described case of a pejorative evolution in two black twin brothers who were heterozygotous composite G1/G2 for APOL1 gene after kidney donation.

Method and result: *Recipient:* A black 21 year old man with end stage kidney disease (ESKD) of unknown aetiology hemodialysed since 2005 was transplanted in July 2006 with the kidney of his identical twin brother proven by mircosatellite analysis. He received prednisolone during 15 days after transplantation without further immunosuppressive therapy. Early outcome was uneventful and creatinin level at one month was 104 μmol/l. Follow-up was unfortunately interrupted. In December 2009, he presented kidney failure with creatinin at 266 μmol/l (GFR 33 ml/min/1.73m^2 in MDRD) and proteinuria at 1.17 g/l. Renal echography was normal. The kidney biopsy showed 15 glomeruli with 9 obsolete glomeruli and one focal segmental glomerulosclerosis (FSGS) lesion and FI/AT2 lesions. Immunofluorescence showed mesangial IgM and vascular C3 staining. As the hypothesis of primary FSGS was raised, the patient was treated with prednisone at the dose of 1 mg/kg for one month with tapering doses without effect without efficiency. In December 2011, creatinin was 1085 μmol/l (GFR 6 ml/min/1.73m^2), proteinuria at 873 mg/mmol of creatininuria. A third biopsy was performed that showed an extensive fibrosis, a majority of obsolete glomeruli (75%) with only 3 normal glomeruli. Our patient was prepared for chronic hemodialysis.

Donor: The twin brother had a normal kidney function with no proteinuria at the time of transplant. Follow-up was also interrupted. In December 2011, creatinin level was 196 μmol/l (GFR 46 ml/min/1.73m^2), albumin at 34 g/l and proteinuria at 2 g/d and without hematuria nor leucocyturia. Genotyping of APOL1 reveal that they were both heterozygote for the G1 and G2 alleles.

Conclusion: We describe the first case of chronic kidney disease linked with APOL1 polymorphism in a black patient that appeared 5 years after kidney donation. This case suggests that genotyping for APOL1 polymorphism should be systematically performed before kidney donation in such population.

P2-0069 RESIDUAL DIURESIS: DOES IT REALLY MATTER BEFORE RENAL TRANSPLANTATION?

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Objective: Patients with end stage renal disease (ESRD), who have prolonged periods of uremia and dialysis, have oliguria causing atrophy and fibrosis, resulting in a small bladder, and potential urological complications after transplantation (Tx). Our objective was to clarify the clinical outcome of renal transplantation in function of residual diuresis volume.

Material and Method: We retrospectively studied 258 patients with ESRD who underwent renal transplantation between January 2008 and December 2011. Patients had pretransplantation diuresis measurement of 24h proteinuria evaluation and were reevaluated the day before the transplantation. Patients were classified into two groups: Patients with a bladder capacity of less than 250 ml (n = 80, group I), and those with more than 250 ml (n = 178; group II). Bladder cycling or augmentation was not performed in any patient. Patients with a history of lower urinary tract malformation, treated by trans ileal diversion or enterocystoplasty were excluded.

Results: Sex ratio, age at Tx, preTx MHC antibodies levels, donor's age, cold ischemia were not different between groups. Dialysis time lapse were longer in group I ($P < 0.001$). We found 12 (15%) urological complications in group I (nine urinary leaks and three ureteral stenoses) and 8 (4.5%) in group II (five urinary leaks and three stenoses). This difference was significant ($P = 0.003$ and Relative Risk = 2.1). At 3 years, graft survival was 74.7% and 94.6% respectively in group I and II ($P < 0.001$).

Conclusions: No studies has previously analysed urological complications of renal transplantation according to residual diuresis. We demonstrated here that residual diuresis lower than 250 ml is a major risk factor of urological complications. It seems to have an impact on graft survival too. Surgical strategy during renal transplantation should be chosen by taking into account recipient residual diuresis.

P3-0071 OUTCOME OF HEPATITIS B AND C VIRUS ASSOCIATED HEPATOCELLULAR CARCINOMAS OCCURRING AFTER RENAL TRANSPLANTATION

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Background: Chronic hepatitis B (HBV) and C (HCV) virus infections are causes of morbidity and mortality in kidney transplant recipients (KTR). The aim of this study was to assess the incidence and outcome of HBV- and HCV-related hepatocellular carcinoma (HCC) in KTR.

Methods: We performed a case-control study in patients with chronic HBV and/or HCV infection who underwent kidney transplantation (KT) between 1976 and 2011 and subsequently developed HCC. Patients' characteristics and outcomes were compared to a control group of HBV and/or HCV positive patients with HCC matched for age and gender who did not have KT.

Results: Among 2944 KTR, 330 had hepatitis B and/or C. Fourteen developed HCC, an incidence of 4.24%. All patients were Caucasian, and 86% were male. Mean age at HCC diagnosis was 52.6 ± 2 years (53.2 ± 1.5 in controls, P = ns). Mean time between transplantation and HCC diagnosis was 16.7 ± 2.7 years. Six HCCs were related to HBV, 6 to HCV, and 2 to co-infection with HBV and HCV. Immunosuppressive therapy was comparable in HBV, HCV and HBV+HCV patients. All patients had corticosteroids. Sixty-four percent of patients received induction treatment and were on triple therapy. At diagnosis, 71% of patients met Milan criteria (65% in the control group, P = ns). Tumour characteristics and treatment modalities including surgical resection, chemoembolization, radiofrequency ablation, or liver transplantation were comparable between the two groups. Patient survival 2 years after HCC diagnosis was 43% in KTR, compared to 76% in the control group ($P = 0.03$). There was no significant difference in overall survival between HBV- and HCV-infected KTR with HCC.

Conclusion: HCC occurs with an incidence of 4.24% in HBV and/or HCV infected patients after KT. Survival after HCC diagnosis is significantly worse compared to a control group of non-transplanted patients with HBV and/or HCV, matched for age and gender, and with similar tumour characteristics.

P4-0082 FACTORS ASSOCIATED WITH HEALTH-RELATED QUALITY OF LIFE IN RENAL TRANSPLANT RECIPIENTS: RESULTS OF A NATIONAL SURVEY IN FRANCE

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Background: This study aims at identifying factors associated with health related quality of life (HRQOL) through a comprehensive analysis of socio-demographic and clinical variables among a representative sample size of renal transplant recipients (RTR) in France.

Methods: A cross-sectional multicenter study was carried out in 2008 in eight French regions. All RTR over 18 year with a functioning graft for at least one year were included.

Data included socio-demographic, health status, and treatment i.e. drugs, side effects and compliance. To evaluate HRQOL, SF-36 and ReTransQol (RTQ) were used. Multivariate linear regression models were used to estimate the relationship between HRQOL scores and socio-demographic, health status and treatment characteristics.

Results: A total of 1061 RTR were included, with a return rate of 72.5. The variance explained in regression models of SF-36 ranges from 20% to 40% and for RTQ, it ranges from 9% to 33%

The variables which decreased scores of both HRQOL questionnaires were: females, unemployment, lower education, living alone, high BMI, diabetes, recent critical illness and hospitalization, non-compliance, and a long duration of dialysis and treatment side effects.

Specifics variables which decreased RTQ scores were dismissal and a recent surgery on the graft. These which decreased SF36 scores were being old and a recent infectious disease.

The variables the most predictors of worse quality of life were: side effects, infectious disease and recent hospitalization and female gender.

Conclusions: Our results emphasized the negative effect of treatment in every dimension whatever QOL questionnaires used. Therapeutic education programs should be performs.

P5-0085 A "HIDDEN" ENTITY: THE SLOW GRAFT FUNCTION AFTER KIDNEY TRANSPLANTATION

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Introduction: After renal transplantation, the delayed graft function (DGF) and immediate graft function (IGF) are defined according to whether or not dialysis is needed in the first week post-transplant. Recently, a third category of recipients is described, with no immediate graft function but without dialysis indication, so called "slow graft function" (SGF). The aim of our study was to compare the impact of DGF, SGF and IGF on renal function at 3 months and one year and the survival of grafts and patients at one year.

Patients and Methods: We performed at the University Hospital of Nice a retrospective study of all consecutive recipients of kidney transplants from deceased donors between 02/07/2010 and 02/07/2011. Patients were classified into three categories DGF, SGF and IGF. In the absence of dialysis, SGF and IGF were differentiated by a reduction rate of serum creatinine (sCreat) respectively ≤ or > 70% calculated by the formula: 100 x (H0 sCreat−D7 sCreat) / H0 sCreat.

Results: We included 82 recipients from 73 donors. The median cold ischemia time, the number of biopsy-proven rejections were equivalent in each group. The median sCreat levels (min-max) at 3 months of DGF, SGF and IGF were respectively 180 μmol/l (82−292), 162 μmol/l (93−379), 139 μmol/l (87−516) ($P = 0.0379$) and one year of 183 μmol/l (99−434), 130 μmol/l (74−273) and 121 μmol/l (84−247) ($P = 0.007$). The median eGFR (min-max) at one year for DGF, SGF and IGF were respectively 35 ml/min/1. 73m ^{2} (13−70), 44 ml/min/1.73m ^{2} (10−80) and 51 ml/min/1.73m ^{2} (24−83) ($P = 0.036$). We did not find a significant difference in eGFR at 3 months between the 3 groups, nor in the grafts and recipients survival at one year.

Conclusion: Overall, we confirmed that an intermediate population between DGF and IGF exists whose long-term outcome in terms of renal function is also intermediate, better at one year than DGF, but not as good as IGF. These SGF recipients correspond with a "hidden" population among the IGF and it is important to screen them for an appropriate therapy in the early postoperative period.

P6-0109 NUCLEAR ACCUMULATION OF SNAIL1, SMAD2/3 BUT NOT ZEB1 IN TUBULAR EPITHELIAL CELLS UNDERGOING PHENOTYPIC CHANGES IN HUMAN RENAL GRAFTS

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Some phenotypic changes reminiscent of epithelial to mesenchymal transition (EMT) in renal tubular epithelial cellular are a sensitive marker of kidney injury and also an early indicator of renal fibrogenesis. EMT can be orchestrated by a number of transcriptional factors, such as snail, ZEB, and smad2/3. However little is known about the expression level of these factors in kidney transplants. In the present study, we measured the nuclear expression of snail1, phosphorylated (p-) Samd2/3 and ZEB1 along with validated EMT markers (vimentin and β-catenin) in 103 biopsies from 91 renal transplanted patients. By immunohistochemistry, we observed the upregulated expression of nuclear snail1 and p-smad2/3 expression, but not ZEB1, in epithelial cells displaying a phenotypic switch. Semi-quantitative score of snail1 was significantly correlated with both EMT markers (cytoplasmic translocation of β catenin ($r = 0.942$, $P < 0.0001$), and *de novo* expression of vimentin ($r = 0.93$, $P < 0.0001$)). The tubular nuclear expression of snail1 and EMT markers were also correlated with graft function and proteinuria at the time of biopsy, as well as evolution of graft function 9 and 21 months post-biopsy. In contrast, ZEB1 expression, involved in cancer associated EMT, was exclusively detected in the endothelial cells from glomerular and peritubular capillaries, but undetectable in epithelial cells whatever the histological aspect. These results suggest the involvement of snail1, smad2/3, but not of ZEB1, in renal transplant associated EMT and thus they are potential biomarkers, and targets for fibrogenesis prevention.

P7-0123 ACCEPTABILITY OF RENAL TRANSPLANTATION ELIGIBILITY IN HEMODIALYSIS PATIENTS : MOROCCAN INTERREGIONAL STUDY

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Introduction: Renal transplantation should be strongly considered for all patients with end stage renal disease. It is less expensive, improves quality of life and increases the life expectancy of patients compared with hemodialysis or peritoneal dialysis.

Advances in recent years have pushed the boundaries and provide renal transplantation to more patients. However, some patients were less likely to receive a kidney transplant.

Methods: To identify the characteristics of eligible patients for kidney transplantation in our midst, we conducted the ARTEMIS study. This multicenter cross-sectional study included hemodialysis patients in 39 dialysis centers of the four Moroccan regions served by the university hospital Hassan II of Fez (Morocco). We studied their medical eligibility as well as their attitudes and knowledge about renal transplantation in Morocco.

Results: In our series, 58% of the 2066 patients are eligible for renal transplantation. Among patients not eligible, 18.2% have absolute contra-indications against and 23.8% have one or more cons-indications. Eligible patients were younger and their average vintage in hemodialysis is shorter ($P < 0.001$).

The majority of patients assert that a kidney transplant provides a better quality of life. However, 56.2% think it is more expensive than hemodialysis. It turned out clearly during our investigation that there is a lack of information regarding renal transplantation in chronic hemodialysis patients. One third of patients believe that Islam does not allow organ donation from living related donor, and almost half think he banned transplantation from brain died donor.

Conclusion: Improving the accessibility of patients to renal transplantation depends on several factors, including religious beliefs, economic status, medical expertise and public opinion.

P8-0128 ASSOCIATION OF CD80 AND CD86 GENES POLYMORPHISMS WITH ACUTE RENAL ALLOGRAFT REJECTION AMONG TUNISIAN PATIENTS

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The activation of naïve T cells requires a co-stimulation signal provided by the interaction between CD28 on the T cell surface and CD86 or CD80 on the antigen presenting cell. This signal leads to clonal-T lymphocytes expansion and differentiation and to cytokines expression. In a later step, T lymphocytes proliferation is down-regulated by the binding of CD80 and CD86 to the CTLA-4, the counter receptor of the CD28, also expressed on the T cell surface. This interaction inhibits immune response and may induce immune tolerance, which is fundamental for allograft acceptance. Thus, the T cell co-stimulatory activation pathway may have an important influence on transplantation outcome, and it is interesting to examine the genetic polymorphisms of the molecules involved in this process.

In this study, we investigated in 271 renal transplants the distribution of genotypes and alleles frequencies of the polymorphisms: (-7) T/C, (-79) C/G, (-232) G/A, (-387) C/T, (-454) C/A and the insertion of 5 nucleotides CATGA (ins -558) localized on the CD80 gene and the polymorphism (+1057) G/A in exon 8 of CD86 gene.

Patients were classified into two groups according to the HLA-haplotype similarity between donor and recipient: Group I (GI) included 39 HLA-identical haplotype allograft recipients and Group II (GII) included 232 recipients showing one or more mismatches in the HLA haplotype.

Seventy two (26.57%) developed at least one acute rejection (AR) episode, 13 in GI and 59 in GII.

Anti-HLA antibodies were searched before transplantation and were detected in 39 patients.

A significant risk of acute renal transplant rejection was found in patients who possessed AHA ($P = 0.03$) and especially in GII ($P = 0.04$).

The genotypic and allelic frequencies distribution revealed an increase of (+1057) A/A CD86 and ins (-558)/ ins (-558) CD80 genotypes in non-acute rejection patients (8.03% and 13.47% respectively) compared to AR recipients (1.39% and 1.39%) ($P = 0.03$ for CD86 polymorphism and $P = 0.007$ for CD80 one).

According to HLA compatibility and Anti-HLA antibodies existence, no significant differences were found between genotypes frequencies in AR and no-AR patients.

In conclusion, this study showed that the (+1057) A CD86 and ins(-558) CD80 alleles may confer protection against renal allograft loss in Tunisian patients.

P9-0129 L'IMMUNOADSORPTION COMME STRATÉGIE DE DÉSIMMUNISATION EFFICACE EN TRANSPLANTATION RÉNALE, PULMONAIRE ET HÉPATIQUE

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Introduction: En transplantation d'organe, l'immunisation anti-HLA est responsable d'un accès restreint à la greffe. L'enjeu est d'utiliser une technique de désimmunisation suffisamment efficace pour permettre de greffer les patients en nécessité de suppléance et minimiser le rejet humoral.

Patients et Méthodes: Six patientes hyperimmunisées (4 rein, 1 poumon, 1 foie) ont pu être greffées après désimmunisation par immunoadsorption (IA) sur colonne de Protéine A (Immunosorba®-Fresenius®). Les anticorps spécifiques anti-donneur (DSA) ont été analysés en Luminex® Single Antigen. Les crossmatch ont été réalisés en cytométrie en flux (FCXM) et en lymphocytotoxicité (LCTXM).

Résultats: La désimmunisation des 4 patientes en attente de greffe rénale a été réalisée en vue d'une transplantation à partir d'un donneur vivant contre lesquels elles avaient entre 3 et 4 DSA et un crossmatch positif en LCT. Le traitement par IA (nombre moyen de séances : 12) a permis d'obtenir : un DSA immunodominant < 3000 MFI, une somme des DSA < 5000 MFI, un LCTXM négatif et un FCXM < 200 MCS. Le suivi a comporté une surveillance sériée des DSA et une biopsie protocolaire à J10, M3, M6, M12 et M24. Deux patientes ont présenté un rejet : un rejet humoral aigu infra-clinique à M6 traité avec succès, et un rejet humoral chronique à M24 en cours de traitement par IgIV.

Nous avons ensuite proposé cette désimmunisation par IA à 2 patientes en attente de transplantation bi-pulmonaire et hépatique respectivement. Le but était de réduire le taux des anticorps anti-HLA de sorte à créer une fenêtre immunologique permettant l'accès à un organe compatible. Après une moyenne de 10 séances d'IA, la greffe a pu être réalisée, avec 5 DSA identifiés rétrospectivement pour chaque patiente et maintenus en deçà de 500 MFI au dernier suivi. Les greffons étaient toujours fonctionnels sans signe de rejet à M9 (poumon) et M3 (foie). La tolérance du protocole a été excellente notamment sans complication infectieuse pour les six patientes.

Conclusion: Ces résultats suggèrent que l'IA permet une désimmunisation rapide et efficace et ainsi l'accès à la greffe, avec une possible extension d'indication pour la greffe d'organes autres que le rein. Cependant, une surveillance immunologique et histologique protocolaire reste indispensable chez ces patients à haut risque de rejet humoral.

P10-0019 EARLY BACTERIAL INFECTIONS IN SIMULTANEOUS KIDNEY AND PANCREAS TRANSPLANTATION: IMPACT OF PRESERVATION FLUID CONTAMINATION

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Contamination of preservation fluid (PF) has been associated with donor-transmitted infection in renal transplantation. Despite the infectious morbidity in simultaneous kidney-pancreas transplantation (SPKT), the role of PF contamination has never been reported. The aim of the study was to analyse the impact of PF contamination in bacterial infections of SPKT recipients.

We retrospectively analysed 75 SPKT performed in our centre, whose PF were systematically analysed. Our analysis focused on the first bacterial infectious episode in the three months post transplantation. A multivariate cox survival model was used to determine the impact of contaminated PF on infection risk.

A total of 30/75 (40%) patients presented at least one infection. Three month infection incidence was 6.6 per 1000 patient-day. Infection sites were mostly intra-abdominal and urinary (30% and 26.7%, respectively). The bacteria that caused the infection were mostly of digestive origin (44.4%). PF cultures were positive in 47 (62.7%) patients. In multivariate analysis, only pancreatic fistula were significantly associated with early bacterial infection (HR = 3.95, IC 95% [1.66-9.04], $P = 0.002$). No association was found between positive PF and early bacterial infection (HR = 0.99 IC 95% [0.47-2.08], $P = 0.97$).

In SPKT, positive PF did not have an impact on early bacterial infections; the main risk factor was post transplant pancreatic fistula.

P11-0139 FACTORS AFFECTING PULSE WAVE VELOCITY AFTER RENAL TRANSPLANTATION

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Background: Increased vascular stiffness recently became an important predictor of cardiovascular mortality in renal transplantation. Our study aimed to determine parameters influencing vascular stiffness, distinguishing those related to the recipient, the donor and the immunosuppressive therapy.

Methods: This prospective monocentric study was conducted at the University Hospital of Strasbourg. Carotid-femoral pulse wave velocity (PWV) was measured 3 and 12 months after kidney transplantation between June 2009 and June 2012.

Results: Eighty-seven patients with a mean age of 50 years [24−76 years] were included. Twelve transplantations were done from living donors and seventy-five from deceased donors of whom 31% fulfilled the ECD definition criteria. PWV at 3 and 12 months was associated with recipient's age, diabetes mellitus, ischemic heart disease, hemodialysis before transplantation or the presence of a functional arteriovenous fistula, donor's age and a cardiovascular cause of death. Moreover, impaired renal allograft function and increased uric acid are also associated with an increase arterial stiffness. Concerning immunosuppressive therapy, patients with calcineurin inhibitors (CNI) tend to have higher values of PWV at 3 months than those without. Patients stopping CNI between 3 and 12 months tend to improve their PWV value (mean delta PWV = − 0.33 ± 1) while patients pursuing CNI tend to increase their PWV value (mean delta PWV = 0.335 ± 1.2), P = 0.12.

Conclusions: These results underline the importance of the different factors influencing vascular stiffness. The consequences of an increase of the PWV still need to be evaluated on the long term in our cohort.

P12-0029 IS KIDNEY TRANSPLANTATION IN END-STAGE RENAL DISEASE PATIENTS OVER 75 A SAFE AND EFFECTIVE KIDNEY REPLACEMENT THERAPY?

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Introduction: With the lengthening of life expectancy, the number of patients over 75 with end-stage renal disease (ESRD) has increased, reaching more than 8 8000 cases in the US in 2009, and raising more and more the question of the best kidney substitute therapy for this patient population.

Methods: We retrospectively analysed the prospectively collected data of all the kidney transplant recipients of our French national database ''CRISTAL'' who (i) were over 75 on the day of their kidney transplantation, (ii) had had their kidney transplantation performed from 2004 to 2010, and (iii) for which the twin kidney graft had been transplanted on a patient under 75. We compared the surgical outcomes of this cohort with the surgical outcomes of the patients under 75, transplanted with the twin kidney graft.

Results: The data of 83 kidney recipients over 75 (58 men / 25 women) were compared to the data of the 56 patients under 75 (26 men / 30 women) transplanted with the twin kidney grafts. Median duration of follow-up was 24.4 months. In our cohort of kidney recipients over 75, 21 deaths were recorded and 8 graft failure, compared to 4 deaths ($P = 0.0038$) and 10 graft failure ($P = 0.25$) in the population of kidney recipients under 75.

Conclusion: Kidney transplantation seems to be an interesting substitutive kidney replacement therapy to offer to ESRD patients over 75, with globally the same functional outcomes compared to younger kidney transplant recipients.

P13-0033 EXPOSURE TO MYCOPHENOLIC ACID ON MYCOPHENOLATE MOFETIL (MMF) AND ENTERIC-COATED MYCOPHENOLATE SODIUM (EC-MPS) IN KIDNEY PANCREAS TRANSPLANT PATIENTS WITH SEVERE GASTROPARESIS

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Background: Because of gastroparesis, pancreas–kidney-transplant patients often suffer from gastro-intestinal (GI) troubles, which compromise drug absorption, thus increasing the risk of rejection. Limited data are available that compare the pharmacokinetics of mycophenolate mofetil (MMF) and enteric-coated mycophenolate sodium (EC-MPS) in this population. Between 2007 and 2011, *27* pancreas–kidney grafts were performed. Of these, 17 patients suffering from severe gastroparesis, who were switched from MMF to EC-MPS, were pharmacokinetically studied to assess levels of mycophenolic acid (MPA).
Methods: The 17 patients (11 men, mean age 42 ± 7 years) were given MMF at 1 g/day and EC-MPS at 720 mg/day. MPA was measured before drug intake, at 20 min, and then hourly for 12 h. Area-under-the-concentration-time curve (AUC_{0-12}) was calculated using the trapeze method, and was dose-normalized. Long-term immunosuppression consisted of tacrolimus (basal level 7–10 ng/ml) and no steroids, except for one patient. MMF was kinetically analyzed on day 169 (median; range: 51–1522) post-transplantation. MMF was switched to EC-MPS on day 182 (median; range: 69–1522) post-transplantation. EC-MPS was kinetically analyzed on day 103 (26–356) after the switch (i.e., median 376 days post-transplantation). Patients were followed-up for a median of 626 (192–1746) days.
Results: Use of proton-pump inhibitors, and tacrolimus and albumin levels did not vary between MMF and EC-MPS. Median MDRD estimated glomerular-filtration rates were also similar: 65 ml/min (37–109) with MMF vs. 69 ml/min (40–99) with EC-MPS. Mean AUC_{0-12} was higher with EC-MPS than with MMF (0.109 ± 0.046 vs. 0.074 ± 0.031 h/l^{-1}, $P = 0.0035$). Ten patients had diarrhea with MMF. After conversion to EC-MPS, diarrhea disappeared in eight out of the 10 patients (80%). No adverse events were noted, especially hematological.
Conclusion: Conversion from MMF to EC-MPS led to improved exposure to immunosuppressive drugs in pancreas–kidney transplant patients with gastroparesis and reduced digestive troubles.

P14-0062 PHYSICAL ACTIVITY LEVEL POST KIDNEY TRANSPLANTATION: EVOLUTION AND IMPACT ON BODY COMPOSITION. RESULTS FROM THE CORPOS STUDY

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Physical activity (PA) level after kidney transplantation (KT) is poorly studied or is not well known, even though it is an important component of the quality of life. It has also been demonstrated that low PA is strongly associated with an increased mortality in kidney transplant recipients (Rosas SE, 2012).

Using the French version of the Baecke self –administered questionnaire, PA was estimated in 41 patients when listing for KT, 12 months before KT, and 1, 6, 12 and 24 months after KT. At the same time, body composition was assessed using both Dual X-ray absorptiometry and bio-impedancemetry, leading to an estimation of Lean Body Mass (LBM), Fat Mass (FM) et Body Cell Mass (BCM). Results are expressed as mean ± SD.

27 men and 14 women (aged 50 ± 12 years) were included. Mean total PA decreased during the waiting time before KT, then increased to reach a maximal level at M 12 post KT. Total PA and three sub-scores (leisure time, occupational and sport related PA) are shown in Table 1.

During the same period post KT, FM and BCM increased significantly ($P = 0.007$ and 0.04 respectively) but not LBM ($P = 0.056$). In multivariate analysis, LBM decrease was associated with higher PA level before KT ($P < 0.0001$). On the contrary, PA level was not associated with neither FM nor BCM evolution.

Successful KT is associated with an improvement of PA level, in relation with an increase in occupational activity. Post KT body composition is associated with pre KT PA level, suggesting that PA should be encouraged in patients on the waiting list, and developed following KT.

P15-0086 FOUR-YEAR OUTCOMES BY DONOR TYPE FROM THE LONG-TERM EXTENSION OF THE BELATACEPT BENEFIT AND BENEFIT-EXT STUDIES

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Introduction: In BENEFIT and BENEFIT-EXT, belatacept was associated with superior renal function and comparable patient/graft survival versus CsA over 3 years, despite a higher rate (BENEFIT only) and grade of acute rejection (AR). Three-year outcomes by donor type were consistent with the overall ITT analysis. Here we report the four-year outcomes by donor type in a long-term extension (LTE) post-hoc analysis.
Methods: In BENEFIT, patients received living (LD) or standard-criteria deceased donor (DD) kidneys; BENEFIT-EXT patients received extended criteria donor (ECD) kidneys. Each was a Three-year phase III study comparing belatacept in a more intensive (MI) or less intensive (LI) regimen versus CsA. Patients on assigned therapy through Year 3 were eligible (471 patients in BENEFIT and 323 patients in BENEFIT-EXT) to enter the LTE. The primary objective of the LTE was to assess belatacept safety and tolerability. Other endpoints were patient/graft survival, cGFR, and AR.
Results: 457/471 patients (BENEFIT) and 304/323 patients (BENEFIT-EXT) entered the LTE. In BENEFIT, 273 and 184 patients received LD and DD kidneys, respectively; in BENEFIT-EXT 204, 97 and 30 patients received UNOS ECD, cold ischemia time (CIT) ≥24 h, and donor with cardiac death (DCD) kidneys, respectively. ECD kidneys could meet > 1 condition. Number of patients for each treatment regimen, patient/graft survival and cGFR by donor type are shown in the Table below. Mean cGFR in belatacept-treated patients across donor subgroups was sustained in the LTE.

Two patients in BENEFIT (1 LI in DD, 1 CsA in LD) and 1 patient in BENEFIT-EXT (MI in UNOS ECD) had AR during Year 4 of the LTE. Rates of serious AEs and infections from randomization through Year 4 were comparable among belatacept donor subgroups. 4 cases of PTLD occurred in the LTE population of BENEFIT-EXT from randomization through August 2011 (3 LI [2 EBV-, 1 EBV+], 1 CsA [EBV+]); no PTLD cases occurred in the BENEFIT LTE population.
Conclusions: Continued belatacept treatment through Year 4 appeared to be safe and well tolerated. The renal function in belatacept-treated patients across donor subgroups was sustained in the LTE population.

	Pre T		Post KT				
	Inclusion	M - 12	M1	M6	M12	M24	p
total PA	6.6 ± 2.24	5.67 ± 2.13	5.58 ± 2.03	5.89 ± 2.13	6.37 ± 1.93	6.03 ± 1.98	0.20
leisure time	2.81 ± 0.86	3.20 ± 0.70	2.85 ± 0.67	2.97 ± 0.65	3.13 ± 0.61	3.07 ± 0.54	0.07
occupational	1.58 ± 1.54	0.59 ± 1.11	0.76 ± 1.31	0.80 ± 1.28	0.94 ± 1.35	0.87 ± 1.35	< 0.01
sport	2.22 ± 0.68	1.89 ± 1.04	1.98 ± 0.76	2.12 ± 0.80	2.30 ± 0.72	2.09 ± 0.71	0.77

4-Year Outcomes by Donor Type

	BENEFIT LTE				BENEFIT-EXT LTE			
	MI $n = 155$	LI $n = 166$	CsA $n = 136$			MI $n = 104$	LIm $n = 113$	CsA $n = 87$
Graft loss or death (LTE), n	1	0	4		Graft loss or death (LTE), n	2	5	1
LD	0	0	2		UNOS ECD	1	3	0
DD	1	0	2		CIT ≥24 h	0	1	0
					DCD	1	1	1
Mean cGFR (LTE), ml/min/1.73 m^2	74	75	50		Mean cGFR (LTE), ml/min/1.73 m^2	55	54	42
LD	75	74	52		UNOS ECD	51	51	38
DD	72	77	47		CIT ≥24 h	60	58	53
					DCD	47	62	33

P16-0101 VALIDATION OF A FRENCH SELF-ADMINISTRATED QUESTIONNAIRE ABOUT QUALITY OF LIFE IN RENAL TRANSPLANT RECIPIENTS TRANSPLANTED FOR LESS THAN 12 MONTHS

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Introduction: Quality of life (QOL) of patients with renal failure has substantially evolved with kidney transplantation. Evaluation of QOL appears essential to help new medical and medico-economical decisions. The Renal Transplant Quality of life questionnaire (RTQ), in the French language, was developed and validated in 2008 in a group of patients transplanted for more than one year. The objective of this study is to extend the validation of the RTQ to patients enrolled in the EPIGREN study and transplanted for less than one year.

Methods: The EPIGREN study is a French, multicenter cohort of renal transplant patients followed during three years. For this study, QOL was evaluated during the first month (M1) and at M3, M6, M9 and M12 post-transplantation using both the self-administrated RTQ and generic QOL SF36 scale. Five dimensions were analysed with RTQ: Physical Health (PH), Mental Health (MH), Medical Care (MC), Fear of losing the Graft (FG) and Treatment (TR). The SF36 scale was used to evaluate two dimensions in particular: Mental Composite Score (MCS) and Physical Composite Score (PCS). Statistical analysis was performed with SPSS 19 software. Confirmatory analysis was done with LISREL software.

Results: At M1, data from 334 renal transplant recipients with a mean age of 53.8 ± 13.2 years was used, with a majority of men (63.2%). During the first year post-transplantation, QOL scores increased significantly with both SF36 (+1.9 and +8.7 points for MCS and PCS, respectively) and RTQ (+10.2, +2.6, +1.3, +0.6 for PH, FG, TR, MC, respectively). MH as measured with RTQ was the only dimension to decrease over time (−2.5 points), possibly due to immediate post-transplant euphoria. The factor structure at M9 was similar to M12 with a total variance of 51% and Cronbach alpha coefficient ranging from 0.7 to 0.9 for the five RTQ dimensions. Accordingly, the principal component analysis showed a stability of RTQ at M9.

Conclusion: The RTQ questionnaire has been validated for patients transplanted for more than nine months and can now be used in clinical practice. However, for patients at earlier post-transplantation periods the model has to be improved.

P17-0107 EPITHELIAL PHENOTYPIC CHANGES ARE ASSOCIATED WITH AN ACTIVE PROFIBROGENIC PROCESS IN HUMAN RENAL GRAFTS

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Our previous studies showed two epithelial phenotypic changes reminiscent of an epithelial to mesenchymal transition (EMT) predicted the progression of fibrosis in renal grafts and the deterioration of graft function. However, the mechanism linking EMT with fibrogenesis is debated. Here, we hypothesized that activated epithelial cells could directly contribute to fibrogenesis, from within the tubules, by producing excessive amounts of matrix. Using immunohistochemistry we measured both EMT markers (the *de novo* expression of vimentin, and the intracellular translocation of β catenin) and the production of three pro-fibrotic molecules (CTGF, hsp47, and laminin), in tubular epithelial cells from 93 renal grafts taken from 77 patients. We indeed observed the production of CTGF, hsp47, and laminin in EMT+ tubules. The score of vimentin was significantly correlated with that of CTGF ($r = 0.785$, $P < 0.0001$), hsp47 ($r = 0.887$, $P < 0.0001$) and laminin ($r = 0.836$, $P < 0.0001$). Tubular expression of vimentin ($r = -0.611$, $P < 0.0001$ for vimentin/eGFR; $r = 0.42$, $P = 0.0006$ for vimentin/proteinuria) and pro-ibrotic molecules were significantly correlated with graft dysfunction and proteinuria at the time of biopsy, while histological lesions (Banff acute or chronic scores) were not. By logistic regression model, vimentin was an independent predictor of low graft function 20 months after biopsy with an odds ratio of 5.58 (95% CI = [1.35−23], $P = 0.02$) after adjustment with eGFR at the time of biopsy and ct score. Our results demonstrate that tubular EMT is associated with an active pro-fibrogenic process in tubular epithelial cells and with graft injury indicators. Perpetuation of this tissue injury-repair response may drive fibrogenesis in renal grafts. EMT markers are definitely relevant to predict graft fibrogenesis.

P18-0147 EDUCATIONAL NEEDS FOR PATIENTS WAITING FOR KIDNEY TRANSPLANTATION

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Introduction: Most of the patients included in post transplantation therapeutic educational program emphazised the fact that pretransplant information was sometimes troublesome and could be improved. Our study aimed to identify educational needs for patients waiting transplantation in order to build up dedicated pretransplant educational program.

Methods: 18 patients were included in the study. Three patients waiting for transplant underwent individual interview. The remaining 15 patients were interviewed in focus groups: waiting for transplant group ($n = 8$) and posttransplant group ($n = 7$). Educational needs were collected among detailed analysis of verbatim expressed by the focus groups and individual interview.

Results: Among all the verbatim expressed by the patients, 20 educational needs were finally collected. Majority of the items were not specific to pretransplant period. Nevertheless, we identified 4 parameters specifically linked to pretransplant period (particularly for non-dialysed patients): ''be aware of one's own sickness evolution'' ''be active for treatment options'' ''feeling that time has come for transplantation'' ''feeling ready to manage one's daily life in terms of social and professional outcome despite unpredictable date and duration of transplantation''. Finally, we propose a list of 28 skills that should be assumed by these patients.

Conclusion: Our study identified specific educational needs for pretransplant period. Based on these results we build a new pretransplant educational pretransplant program to improve the information delivered before transplantation for a better patient's satisfaction, and hopefully better outcome after kidney transplant.

P19-0170 RENAL TRANSPLANTATION AND OBESITY: SHOULD WE CHANGE THE MODALITY OF PRESCRIPTION OF CNI?

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Introduction: Frequency of obesity is increasing in renal transplantion recipients as it is the case in general population, notably because of survival rate of these patients on dialysis. In our center, obese patients (OP) represent regularly more than 15% of de novo transplanted patients from 2005. Medical or surgical complications are feared, but little is known about best immunosuppression in OP, with particular pharmacocinetic features. We were interested in this study on looking at evolution of calcineurin inhibitors (CNI) dosage during first six month of renal transplantation in OP.

Methods: From January 2005 to June 2011, reported data were extracted from DIVAT network.

Results: During this period 527 kidney transplantations were performed, with 95 (18%) concerning OP.

62% of OP were on Ciclosporin on day 0, and 47% of non obese patients (NOP). Tacrolimus is the CNI used in 38% of OP, and 50% of NOP.

Initial dosage for all patients is 6 mg/kg/d bid for ciclosporin and 0.15 mg/kg/d bid for tacrolimus, and is later adapted to blood level of each CNI.

At month 3, tacrolimus is so decreased in the 2 group, but in a more important way in OP to 0.072 ± 0.03 mg/kg versus 0.09 ± 0.05 mg/kg in NOP. The difference is even more important with ciclosporin, which dosage is 2.8 ± 0.5 mg/kg/d in OP versus 3.45 ± 0.9 mg/kg/d in NOP.

At month 6, difference is still present with ciclosporin dosage at 2.32 ± 0.35 mg/kg/d in OP and 3.14 ± 0.85 mg/kg/d in NOP ; but less important for tacrolimus which dosage is 0.068 ± 0.04 mg/kg/d in OP and 0.076 ± 0.04 mg/kg/j in NOP.

Discussion: From an initial body adjusted dosage identical in the 2groups (OP and NOP), reduction of CNI dosage, particularly for ciclosporin seems to be more important in OP along first 6 month after transplantation. This evolution adapted to observed blood levels (analysis currently realised) can reflect potential toxicity more important in OP. This could justify reevaluation of modality of prescription of CNI in this group. Pharmacocinetic study, not ever existing, could help in this way.

P20-0180 NEUTROPENIA IN CMV D+/R- KIDNEY TRANSPLANT RECIPIENTS: RETROSPECTIVE STUDY OF INCIDENCE, RISK FACTORS AND CONSEQUENCES

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Introduction: First year post-transplant neutropenia (PTN) is frequent (up to 50% of patients) and often iatrogenic. Since mycophenolic acid (MPA) and valganciclovir (VGC) association seems to be especially involved, cytomegalovirus seronegative recipients transplanted with kidney from seropositive donors (CMV D+/R-) are highly exposed to PTN. However, no specific study has been done on the PTN risk factors of this population.

Method: All CMV D+/R- kidney transplant recipients in Rennes university hospital between 11/01/2003 and 05/31/2011, treated by VGC for CMV prophylaxis, were included in our retrospective study. PTN was defined by neutrophil count under 2000/mm^3.

Results: On the 93 patients, 72 (77.4%) had at least one PTN episode (neutropenia group). Median time to PTN was 94 days [74 – 120]. The only identified risk factor was a lower neutrophil count in the first days after transplantation in the neutropenia group (5900/mm^3 vs. 7710/mm^3, $P < 0.05$). First month neutrophil count variations were similar between both groups. No differences were seen between treatments or daily or total doses of MPA or VGC. MPA AUC at the time of PTN were not different between groups, while first MPA AUC after transplantation were higher in the no neutropenia group (AUC more than 60 h mg/l: 45.5% vs. 17.7%, $P < 0.05$). Infections were more frequent in the neutropenia group (26.5% versus 0%, $P < 0.01$) but often minors. After VGC stop, CMV primo-infections happened earlier in the neutropenia group (53 days vs. 157 days, $P < 0.01$) and were more symptomatic. Five acute rejections occurred in the 3 months after PTN and none for the same period of transplantation in the no neutropenia group ($P = 0.33$).

Conclusion: CMV D+/R- kidney transplant recipients are at high risk for PTN in the first year of transplantation. The only risk factor identified in our study is a lower neutrophil count in the first days after transplantation. However, no dose-effect of MPA or VGC was found.

P21-0052 HLA-G POLYMORPHISM, A MOLECULE INVOLVED IN MATERNO-FETAL TOLERANCE IS ASSOCIATED WITH A REDUCTION OF ACUTE REJECTION AND IMPROVED GRAFT SURVIVAL IN RENAL TRANSPLANTATION

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Introduction: Few markers of good outcome of kidney transplants have been demonstrated. We have shown that HLA-G, a protein belonging to the non-classical class I molecules and involved in feta-maternal tolerance is associated with a good outcome of combined liver and kidney transplants. It is associated with a reduced risk of liver and kidney rejection. HLA-G is also associated with a reduced risk of cardiac rejection. In kidney transplantation, the group P. Terazaki showed that soluble HLA-G is associated with a reduction of number and titer of anti-HLA antibodies. Several polymorphisms (SNPs) of HLA-G have been described. The purpose of this study is to determine whether certain HLA-G polymorphisms are associated with a better outcome of renal transplantation.

Materials and Methods: 300 patients of the TRANSGENE study (declared to the CNIL in 2004) were included. Their genomic DNA was obtained and genotyped for the following SNPs were performed using TaqMan allelic discrimination assay (ABI prism 7000, applied biosystems, Courtaboeuf, France): HLA –725 C> G (rs) , HLA 3142 G> C (rs1063320) and deletion / insertion 14 bp. IL10 polymorphism previously described by the group G. Opelz being associated with a good evolution of second transplant was performed: SNP IL10–592C> A (rs1800872) and IL10 –1082 A> G (rs1800896).

Results: In the Caucasian population, the occurrence of acute rejection (RA) was higher in carriers of the –14bp allele versus those with +14bp allele (42% vs. 32%, $P = 0.02$) , those with HLA 3142C vs. 3142G (43% vs. 34%, $P = 0.04$), or HLA-725G vs. HLA-725C (51% vs. 37%, respectively $P = 0.07$). No association was found for IL10 polymorphism. Only the -725 C allele HLA is associated with better graft survival (HR: 0.30, 95% CI: 0.13 to 0.69, $P = 0.005$).

Conclusion: In our Caucasian population, polymorphisms of HLA-G (–725C, 3142C, and Ins / del 14 bp) are associated with a lower incidence of RA and polymorphism–725C has a better outcome of the renal transplantation.

P22-0134 RENAL TRANSPLANTATION IN PATIENTS WITH NEUROGENIC BLADDER FOLLOWING MITROFANOFF URINARY DIVERSION

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Introduction: For patients with end-stage renal failure caused by a dysfunctional lower urinary tract, complex therapeutic strategies are necessary to treat such infermeties, combining kidney transplantation and, if possible, confection of continent urinary diversion. In this concept Mitrofanoff continent urinary diversion (MCUD) may be proposed at a first surgical procedure step followed by renal transplantation. We report our results of renal transplantation performed in five adolescents with history of childhood advanced neurogenic bladder complicated by renal failure.

Materials and Method: Retrospective study of 300 kidney transplantations carried out between 1994 and 2012. Five patients (four female and one male) who underwent MCUD before transplantation were reviewed.

Results: The mean age at the moment of renal failure diagnosis was 7.8 years (6–10). Kidney transplantation was done at the age of 16.4 years (11–22). MCUD was performed in all cases before kidney transplantation and realized ileocystoplasty, using appendix as a conduit in three cases, right pelvic ureter in one case and ileum graft (Monti) in one case. Transplantation was realized after an average of 9 years (6–15) after MCUD. The mean follow up period was 2 years (1–5) after transplantation. Grafts were well functioning with significant improvement of quality of life, except one case of recurrent acute pyelonephritis treated with adapted antibiotic therapy and reeducation of self catheterization modalities.

Conclusion: Previous MCUD with Ileocystoplasty in patients with advanced neurogenic bladder complicated by end-stage renal failure allows improvement of quality of life of such patients before and after.

Kidney transplantation with good results provided a self-adequate care of the diversion was respected.

P23-0173 HYPERCHOLESTEROLEMIA PROMOTES THE INHIBITION OF ENDOTHELIAL CELL PROLIFERATION IN A PIG MODEL OF RENAL AUTOTRANSPLANTATION : EFFECT OF THROMBOSPONDINE–1

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Introduction: The organs shortage contributes to the expansion of selection criteria for older donors. Consequently, the grafts are exposed, in donors and recipients, to comorbidity factors such as dyslipidemia, which could influence the graft outcome. Thus, hypercholesterolemia contributes to vascular lesions initiated by the transplant process, and could inhibit repair processes such as neoangiogenesis.

Materiel and methods: This study aimed to investigate in a kidney autotransplanted pig model, the effect of a diet enriched in cholesterol on the post-transplant renal angiogenesis by focusing on the pathway regulated by the transcription factor HIF1-α (hypoxia inducible factor). We determined *in vitro* the role of thrombospondin-1 (TSP-1) in these regulatory mechanisms.

Results: We have demonstrated, 3 months after transplantation, a decrease in the expression of $\alpha_5\beta_3$ integrin by cholesterol-enriched diet suggesting a reduction in endothelial proliferation in the graft. In addition, hypercholesterolemia inhibits the overexpression of vascular endothelial growth factor VEGF-A, but stimulates the transcription factor HIF1-α. This inhibition of VEGF may be related to observed overexpression of the protein TSP-1 activated by ADAMTS1 secreted by macrophages whose infiltration was significantly more important in the hypercholesterolemic group. *In vitro*, we showed that oxidized LDL mimicking hypercholesterolemia are able to limit the expression of $\alpha_5\beta_3$ integrin by human artery endothelial cells. In a model, mimicking the inflammation within the graft, cells exposed to TNF-α overexpress TSP-1 significantly. We also confirmed that the peripheral mononuclear cells were able to secrete ADAMTS1.

Conclusion: These results underline that hypercholesterolemia induces an early modification of the angiogenic response HIF1-α dependent in the graft, and suggesting the involvement of TSP-1 and its activator ADAMTS-1 underlighting the role of macrophage infiltration.

P24-0012 EARLY PROTOCOL BIOPSIES IN PEDIATRIC RENAL TRANSPLANTATION

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Introduction: Graft protocol biopsies (GPB) are usually performed in pediatric Renal Transplantation (RT), and revealed subclinical acute rejection (SBAR) or interstitial fibrosis and tubular atrophy (IF/AT) in 25 to 40% of the recipients. Corticosteroids (CS) are widely administered in PRT but are responsible for many side effects. We report on the results of GPB in children transplanted with a steroid minimization protocol adapted to immunological risk.

Methods: Children less than 18 years who received a RT in Nantes hospital between 01/04/2009 and 31/12/2011 were included. Immunosuppression (IS) consisted in an induction therapy, tacrolimus and mycophenolate mofetil for all. Corticosteroids (CS) were administered in children under 5-year-old and in second RT. GPB were performed between 3 to 6 months. The glomerular filtration rate was estimated (eGFR) according to Schwartz formula.

Results: Twenty seven children were included. Median recipient and donor age were respectively 9 and 16 years. Most of the transplantations were from a deceased donor (82%), 48% of the recipients received a preemptive RT. Fourteeen children (48%) were CS-free. During the first 6 months, GPB were performed in 25 cases, 6 others biopsies were performed for reason (all were normal). IF/TA was documented in 6 GPB, 4 out of these 6 children were CS free. One child, with CS, has presented a border-line rejection associated with IF/AT, IS was so increased. Another child, CS free, had an important inflammatory interstitial infiltrate considered as a SBAR and had been treated with CS pulses The mean eGFR was stable (81, 72 and 82 ml/min/1.73m^2 at respectively seven days, three months and one year). Significant proteinuria was observed only in the patient with borderline rejection.

Conclusion: SBAR and IF/AT was not increased in our cohort, despite that half of the recipients were CS free. These results have to be confirmed in larger cohorts and long-term follow-up have to be evaluated.

P25-0059 AN OSTEOPATHIC TREATMENT REDUCES POST RENAL TRANSPLANTATION PAINS AND IMPROVES THE QUALITY OF LIFE OF PATIENTS WITH KIDNEY TRANSPLANTS

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Introduction: Kidney Transplantation (RT), while improving the quality of life of patients with chronic renal failure, is a painful procedure and requires analgesic treatments. For some patients, pain persists after RT (> 15 days). 25% of them have joint or back pain and 23% have musculoskeletal pain. These postoperative RT pain have an impact on the quality of life of kidney recipients. Support osteopathy has been showed to reduce post surgical pain. The objective of this study is to evaluate the feasibility and the impact of osteopathic treatment in renal transplanted patients with persistent pain post RT.

Methods: A survey of pain was performed in 117 patients. An osteopathic care adapted to their pain was offered to those who had persistent pain away RT. It consisted of two successive consultations. Assessment of pain and its impact on quality of life was made at each visit and 15 days after the last consultation. Pain was evaluated by the Short Questionnary of Pain (QCD), a visual analogic scale (VAS) and the quantification and qualification of analgesics used. Quality of life of patients was assessed by SF-36 questionnaire (Short Form Health Survey).

Results: One third of the transplanted patients (39/117) had pain post-RT. Some pains were already known before the RT (57.1%), others have emerged waning (42.9%). The most frequent pain with a link to the RT was scar pain, abdominal and / or back pain. Fourteen patients have been included in the study. After osteopathic care, the main pain of patients decreased significantly by 87.2 ± 27.9% and secondary pain by 90.8 ± 21.7%. Most of the patients stopped analgesics (13 of 14 patients). Quality of life of patients was improved by 29.7%.

Conclusion: Within the limits of this pilot study, the results showed that osteopathic care could reduce pain and improve the quality of life of patients who underwent RT.

P26-0081 STEROID AVOIDANCE FOR RENAL TRANSPLANTATION: A PILOT STUDY OF 98 RECIPIENTS

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Introduction: Steroid avoidance is a crucial point of immunosuppression in renal transplantation. The goal is to reduce the adverse events associated with steroid treatment, without impacting on the patient survival and graft outcome. However, little is known concerning steroid avoidance at day 1 post-transplantation.

Method: A retrospective monocentre study is performed during the period Dec 2005 to Dec 2010, in primary graft kidney recipients. Inclusion criteria are age from18 to 75 years old, HLA PRA < 20%, and steroid avoidance at day one, after bolus of methylprednisolone performed before and after renal transplantation.

Results: In total, 98 patients are included. Median age is 53.0 ± 10.4 years, mainly male (64%), caucasian (93%), receiving mainly a graft from deceased donor (94%), whith 34% from extended criteria. Mean donor age is 50.8 ± 15.2. HLA compatibility is 1.86 ± 0.94 and mean cold ischaemia time was 14.9 h ± 5.3. The median follow up time is 29 months. The immunosuppressive treatments include an induction by anti-R Il-2 monoclonal antibody (basiliximab : 93%), ciclsporine A (99%) and mycophenolate mofetil (85%). A the end of the study, the patient and graft survival is 100% and 94% respectively. The renal function remains stable with a mean GFRe at 49.7 ml/min/1.73 m^2 ± 16.5 at 2 years. The actuarial incidence of biopsy-proven acute rejection is 11.2% (11 patients), mainly IA according the Banff 2005 classification (8/11) and early diagnosed (5/11 during the first 6 months). Nine patients (9.2%) are diagnosed with NODAT. For *de novo* donor specific HLA antibodies, 7/80 patients are detected (8.75%) during study.

Discussion: In renal transplant recipients at low immunolgical risk, steroid avoidance is associated with a low incidence of acute rejection and NODAT. The limits of this monocentric study are the absence of protocol graft biopsy to evaluate the incidence of subclinical acute rejection. However the real advantage of this strategy will be evaluable only at long-term, particularly for cardiovascular events.

P27-0088 SOCIAL TRENDS IN LIVING RENAL DONORS IN A SINGLE CENTER

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Introduction: Kidney transplantation is the best treatment for ESRD in particular from living related donors; it is associated with excellent results.

The aim of this report is to evaluate the epidemiological paterns (age, sex) and social trends in living donors and to determine the percentage and causes of refusing donors among all donors challenged to donate in a newly functional transplant center.

Material and methods: Our report is about 44 related living donors evaluated from November 2010 to August 2012 in a newly functional kidney transplantation center.

Their records were retrospectively analyzed for age, sex, relationship donor / recipient, transplant successful or not and the reasons for refusing prospective donors.

Results: There were 22 women (50%) and 22 men (50%), sex ratio: 1, with a mean age of 42.4 years (range 21−87).

The relationship with the recipient was: siblings in 21 cases (48%), husbands / wives in 7 cases (15%), parents to children in 12 cases (28%) and other related relationship in 4 cases (9%) other. We noted no donation from children to parents.

Among the 44 donors, 29 (66%) were not selected for donation. The causes were hypertension in 2 cases, ABO Incompatibility in 4 cases, Nephrolithiasis in 5 cases, glomerular hyper filtration in 4 cases, Vascular renal abnormalities in 4 cases, age limit in 2 cases (teenaged or elderly), positive cross-match in 3 cases and Impaired Glucose Tolerance in 1 case, pregnancy in 1 case and other causes in 3 cases.

Among the 44 donors, 15 donors (34%) were operated: 7 women and 8 men with a mean age of 41.8 years (range: 28−57).

Discussion: The percentage of donors challenged is high. But medical causes of non selection of kidney donors in our report are noted in 65% of cases. Some refusing living donor's causes are not final and can be temporary as pregnancy, glucose intolerance and age limit.

In our donors, there is no gender differences among donors, there are as many men as women. Relationship between the most frequent donors is between brothers and sisters. We found no donation from children to parent. In fact, we note the reluctance of our medical team to collect a kidney from a very younger donor to a much older patient.

Conclusion: There was high incidence of sibling-to-sibling donation with no preponderance in gender and peak age range 28−57 years. Kidney transplantation from living donors offers many benefits to the recipient but imposes a donor selection. From 44 living donors, 66% were finally not selected. Some temporary causes can be discussed to shorten waiting kidney transplantation list.

P28-0103 CROSS VALIDATION OF SEMI-QUANTIFICATION OF EPITHELIAL PHENOTYPIC CHANGES IN KIDNEY TRANSPLANTS

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Phenotypic changes commonly occur in tubular epithelial following some form of renal injury, and are reminiscent of an epithelial to mesenchymal transition (EMT). Some are semi quantitatively correlated with interstitial fibrosis and tubular atrophy (IF/TA) progression and therefore could be useful as biomarkers of an ongoing fibrogenic process in the graft. Furthermore, they were demonstrated to be independent predictors of long term graft dysfunction. Detection of EMT by immunohistochemistry is a very simple technique which can be performed in any lab, but we don't know whether the semi-quantification of EPC markers can be easily reproduced. To address this question, we performed a pilot study in which 19 renal biopsies from kidney transplants were used for immunohistochemical staining with anti-vimentin and anti-beta catenin antibodies. Semi-quantification of staining was performed according to the previously described score in our laboratory: 0, 1, 2, 3 and 4 for 0 to 5%, 6 to 10%, 11 to 25%, 25 to 50% or more than 50% of tubular sections respectively. Semi-quantitative scores were determined independently by 2 investigators in Tenon hospital (Paris) and in Charles Nicolle hospital (Tunis). Kendall's coefficient of concordance showed a good concordance of EMT scores by the two readers: 0.897 for vimentin, $P = 0.02$; and 0.788 for β catenin, $P = 0.057$. Thus we conclude that the semi-quantification of EMT markers is both easy and reproducible from lab to another.

P29-0108 ASSOCIATION BETWEEN POLYMORPHISMS IN TARGET, METABOLISM OR TRANSPORT PROTEINS OF MYCOPHENOLATE SODIUM AND BPAR OR ADVERSE EVENTS IN RENAL TRANSPLANT PATIENTS

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Introduction: Different associations between SNPs in target, metabolism or transport proteins, and BPAR, diarrhea, anemia and leucopenia have been published in transplant patients receiving mostly mycophenolate mofetil (MMF). This work aimed at studying them all in a single population on enteric-coated mycophenolate sodium (EC-MPS).

Methods: This study included 190 renal transplant patients from the DOMINOS study[1]. Nine SNPs in *IMPDH2*, *IMPDH1*, *ABCC2*, *SLCO1B3*, *UGT1A8*, *UGT1A9* and *UGT2B7* were genotyped in all patients using TaqMan assays (ABI Prism 7000, Applied-Biosystems). Associations with the first event of BPAR or diarrhea adjusted on cyclosporine exposure, EC-MPS dose, age and gender were investigated using multivariate logistic regressions. Hemoglobin levels and leucocyte counts were measured at 12 different visits between days 0 and 190 post-transplantation, and their associations with SNPs were studied using linear mixed-effect models.

Results: Multivariate analyses showed that the *ABCC2* −24 C>T variant allele was the only factor associated with increased risk of BPAR (CT vs. CC: OR [95%CI] = 2.85 [1.25,6.46]; $P = 0.012$). Female gender and *UGT1A8*2* were associated with increased risk of diarrhea (F vs. M: 3.03 [1.23,7.50]; $P = 0.016$ and *1/*2-*2/*2 vs. *1/*1:2.73 [1.10,6.82]; $P = 0.028$). Higher EC-MPS doses were associated with increased leukocyte counts (1.56 G/l per 1gr EC-MPS; $P < 0.0001$) and with decreased hemoglobin concentrations (-1.43 g/dl per 1gr EC-MPS; $P < 0.0001$).

Conclusion: Most of the previously published pharmacogenetic associations with MMF were not found with EC-MPS in a single population of 190 renal transplant patients.

P30-0127 PHARMACOLOGICAL EVALUATION OF A REDUCED DOSING STRATEGY OF MYCOPHENOLATE MOFETIL IN TACROLIMUS-TREATED RENAL TRANSPLANT PATIENTS

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Unlike Ciclosporine A, tacrolimus (Tac) does not inhibit the entero-hepatic recycling pathway of mycophenolate mofetil (MMF) and thereby increases its systemic exposure. Consequently, MMF dosage should be decreased when combined with Tac even though there are currently no clear guidelines regarding the appropriate dose of MMF to be used in association with Tac. In our center, we used a reduced dosing strategy in Tac-treated patients consisting in 750 mg MMF bid for the first week and 500 mg bid thereafter. We report here the pharmacological evaluation of this strategy.

One thousand abbreviated Area under the Curve (AUC) of mycophenolic acid (MPA) were estimated through a Bayesian approach in 374 renal transplant Tac-treated patients at different time after transplantation. We evaluated the proportion of patients with MPA AUC between 30−60 mg/l*h.

Mean (±SD) MPA AUC was 36 ± 17 mg/l*h, ranging from 6.1 to 124 mg/l*h. Fifty percent of AUC were within the 30−60 mg/l*h target. The majority (75%) of off-target AUCs were below the therapeutic threshold of 30 mg/l*h.

In conclusion, arbitrarily reducing MMF dose in Tac-treated renal transplant patients can lead to a MPA underexposure in a large proportion of patients throughout the course of transplantation. In this context and given the absence of a validated posology, therapeutic drug monitoring might be of interest.

P31-0130 DOES KIDNEY TRANSPLANTATION WITH MULTIPLE ARTERIES AFFECT GRAFT SURVIVAL

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Introduction: Kidney grafts with multiple arteries have been suspected to be associated with a higher incidence of vascular and urological complications and to affect subsequent renal function. We intend to compare short and long-term outcomes of renal transplants with single versus multiple arteries.

Material and Methods: We analyzed retrospectively data from 300 kidney transplantations performed between April 1994 and June 2012. Renal grafts were divided into 2 groups: 235 with single renal artery (SRA) and 65 with multiple renal arteries (MRA). The 2 groups were compared regarding acute rejection episodes, vascular and urological complications (Chi square test). Graft survivals were compared between these 2 groups using Kaplan-Meier survivorship curves and log rank test.

Results: In Group 1, 97% of arterial anastomoses were performed end to side to the external iliac artery. In Group 2, vascular reconstruction was done end to side to the external iliac artery as multiple anastomoses in 51 cases (78.5%), conjoined anastomosis between two arteries of equal size in 2 cases (3.1%), common aortic patch anastomosis in 4 cases (6.2%). In 8 cases (12.3%), a hail artery was sacrificed.

Both groups were comparable regarding: acute rejection (G1: 9.8%, G2: 9.8%, *P:* 0.9), vascular complications (G1: 18.7%, G2: 23.1%, *P:* 0.4) and urological complications (G1: 11.1% , G2 : 12.3% , *P*: 0.7) if compared globally and individually.

Transplant function as well as graft survivals were comparable in both groups : Five years and 10 years graft survival were 75% and 60.3% in Group 1 and were 73% and 61% in Group 2 with no significant difference (*P:* 0.8).

Conclusion: The use of MRA allografts is a safe and successful surgical procedure, without influence on patient or graft survival and without increasing of surgical complications rate provided the surgical team is evolved with skill and good technicity.

P32-0133 PROFILING SIROLIMUS-INDUCED INFLAMMATORY SYNDROME: THE SIRILYGRE STUDY

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Background: The use of the immunosuppressant sirolimus in kidney transplantation has been made problematic by the frequent occurrence of various side effects, including paradoxical inflammatory manifestations, the pathophysiology of which has remained elusive.

Methods: 30 kidney transplant recipients that required a switch from calcineurin inhibitor to sirolimus-based immunosuppression were prospectively followed in 3 transplantation centers. Inflammatory symptoms were quantified by the patients using visual analogue scales and serum samples were collected before, 15, 30, and 90 days after the switch.

Results: 79% of patients reported at least 1 inflammatory symptom, cutaneomucosal and digestive manifestations being the most frequent. Clinical presentation was characterized by its lability and stochastic nature, each patient exhibiting a unique clinical presentation.

The biochemical profile was more uniform with a drop of hemoglobin and a concomitant rise of inflammatory acute phase proteins, which peaked in the serum 1 month after the switch. Analyzing the impact of sirolimus introduction on cytokine microenvironment, we observed an increase of IL6 and TNFα without compensation of the negative feedback loops dependent on IL10 and soluble TNF receptors. IL6 and TNFα changes correlated with the intensity of biochemical and clinical inflammatory manifestations in a linear regression model.

Conclusion: Sirolimus triggers a destabilization of the inflammatory cytokine balance in transplanted patients that promotes a paradoxical inflammatory response with mild stochastic clinical symptoms in the weeks following drug introduction. This pathophysiologic mechanism unifies the various individual inflammatory side effects recurrently reported with sirolimus suggesting that they should be considered as a single syndromic entity.

P33-0135 A MULTIPLICATIVE-REGRESSION MODEL FOR RELATIVE SURVIVAL TO COMPARE THE EFFECT OF FACTORS ASSOCIATED WITH THE TIME TO GRAFT FAILURE BETWEEN FIRST AND SECOND RENAL TRANSPLANT

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Background: This is established today that second renal transplant recipients (STR) and first renal transplant recipients (FTR) have close outcomes. However, to our knowledge, the comparison of risk factors associated with graft failure between STR and FTR has never been performed.

Methods: We propose a multiplicative-regression model for relative survival (MRS model) to study the factors associated with the time to graft failure (return-to-dialysis or patient death) of STR compared to a matched population of FTR. We performed an observational prospective study based on 641 STR from the multicentric French DIVAT database transplanted between 1996 and 2010. The expected graft failure hazard was estimated using a parametric proportional hazard model based on 2462 FTR performed over the same period.

Results: The graft failure hazard associated with the recipient age (≥ 55 years vs. < 55 years) was 1.6-fold higher for STR compared to FTR ($P = 0.0387$). Conversely, graft failure hazards associated with the donor age (≥ 55 years vs. < 55 years) and the donor type (deceased versus living donor) were respectively 1.7-fold lower ($P = 0.0294$) and 3-fold lower ($P = 0.0332$) for STR compared to FTR.

Conclusions: We developed for the first time in renal transplantation a MRS model to study the effect of factors associated with graft failure for STR and based on an estimated expected hazard from FTR. This innovative use of the MRS model offers original clinical results useful for clinicians.

P34-0142 PROGNOSIS VALUE OF CIRCULATING C1Q -FIXING ANTI-HLA ANTIBODIES DURING CHRONIC ALLOGRAFT NEPHROPATH

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Introduction: The pathogenic role of complement in the humoral chronic rejection of kidney transplants is evidenced by complement deposits on renal biopsies. The aim of this work was to investigate whether circulating HLA antibodies specific of one or more donor antigens (DSA) and fixing the C1q (C1q+DSA) have a higher pejorative value on graft outcome than antibodies which do not fix the C1q (C1q-DSA) in patients with chronic allograft nephropathy (CAN).

Patients and Methods: 18 patients (8F, 10M), 23–69 year-old ($m = 49.8$) with biopsy-proven chronic allograft nephropathy according to the Banff 2008 classification and at least two sera igG DSA+ over a 3-month interval were included in the study. Serum samples were analyzed with Luminex technology beads « Single antigen » (One Lambda) for each of classes I and II antigens. C1q-fixing antibodies are revealed by an anti-C1q conjugated to phycoerythrin. Are considered positive the serum samples with a mean fluorescence intensity (MFI) greater than 1500 for C1q+ DSA. All patients were on triple therapy (calcineurin inhibitors, corticosteroids, MMF or Aza). Rituximab infusions were performed in 4P. Follow-up analysis include at first graft loss and, secondly, outcome of renal function.

Results: 14 patients (P) were DSA + C1q+ and 4 P were DSA+ C1q-. For the 14 patients DSA+C1q +, kidney biopsies were carried out between 13 and 95 months after transplantation ($m = 52.6$), mean serum creatinine level at the time of biopsy was 243μmol/l. 10P out of 14 have C4d peritubular capillary deposits on renal biopsy. 11P have DSA directed against class II antigens (Ag), and 3P also have anti- class I DSA. With a mean follow-up of 31.6 months [15–58 months], 10/14 grafts are still functioning with serum creatinine level ranging from 150 to 370 μmol/l ($m = 215$μmol/l), whereas 4/10 P return to dialysis 25–41 months after the biopsy ($m = 30,7$). For the 4P, DSA+ C1q-, the biopsy was performed between 13 and 84 months after transplantation ($m = 50.2$), Mean serum creatinine level was then 204 μmol/l. DSA were directed against class I Ag for 2P and against class II Ag for the 2 other one. At the end of the follow-up (12 and 15 months), 2/4 grafts are still functioning (serum creatinine levels 350 and 170 μmol/l), 2/4 were lost 14 and 62 months after the biopsy.

Discussion and Conclusion: This preliminary work does not suggest a deleterious role for DSAC1q + compared to DSAC1q- when lesions of NT/IA are already established. We can highlight that there was no significant difference of follow-up, initial renal function, or change in immunosuppressive therapy between the two groups Because an additional cost of approximately 40% when using the C1q procedure, larger studies are needed to define the potential interest of this research, at least when chronic lesions are recognized.

P35-0156 EFFICACY AND TOLERANCE OF A SECOND INDUCTION TREATMENT WITH RABBIT ANTITHYMOCYTE GLOBULIN AFTER RENAL RETRANSPLANTATION

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Background: It is unknown whether kidney transplant patients who receive rabbit antithymocyte globulin (rATG) become immunized against rabbit antibodies leading to subsequent reduction in efficacy or are at higher risk of cytomegalovirus infection or post-transplant lymphoproliferative disorder (PTLD) on retreatment. The efficacy and tolerance of rATG when used as induction for the second time in patients undergoing retransplantation were studied.

Methods: In a retrospective case control study, 54 retransplanted patients who received rATG induction for the second time during 2004–2010 were compared to a matched cohort of 108 patients receiving rATG induction for a first kidney transplantation. Maintenance immunosuppressive treatment and use of cytomegalovirus prophylaxis were similar in both groups.

Results: Median follow-up was 45.8 months and 47.3 months in the second and first treatment groups, respectively. No differences were observed between the two groups in terms of leukocyte, lymphocyte or platelet depletion. Dose and duration of rATG treatment was similar in both groups, suggesting a similar tolerance profile. Cytomegalovirus infection (including primoinfection and reactivation) occurred in 4/54 retreated patients versus 22/108 controls (P = 0.108). PTLD occurred in one control patient and no retreated patient.

Conclusion: A second course of rATG induction results in similar lymphocyte depletion and is as well tolerated as a first course. The incidence of cytomegalovirus infection and post-transplant lymphoproliferative disease was not increased in the retreatment group. Further studies are required to evaluate specific T cell subpopulation depletion and to compare long-term outcome in patients receiving a second induction with rATG.

P36-0169 OBESITY AND SURGICAL COMPLICATIONS IN RENAL TRANSPLANTATION

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Introduction: About 15% of general population is concerned by obesity justifying ''Obesity plan'' from 2010. Obese patients (OP) survival in dialysis explain the increasing number of OP on the waiting list. From 2005, in Nancy, OP represent more than 15% of de novo transplanted patients. We report here frequency of main surgical complications observed in these patients of our center.

Methods: From January 2005 to June 2011, reported data were extracted from DIVAT network.

Results: During this period, 527 kidney transplantations could be analysed. 95 were OP (18%), whereas 432 were non obese patients (NOP).

Warm ischemia, reflecting surgical duration, is longer in OP: 52.1 ± 20.5 min compared with 42.8 ± 18.4 min in NOP.

Surgical complications are more represented by parietal problems:

Abcesses and hernias are observed in 20% of OP compared with 4.6% in NOP.

Urologic complications are also observed:

Urine leakage, ureteral stenosis or lymphoceles are observed in 35% of OP versus 25% in NOP.

Vascular complications are unfrequent with 3 early arterial thrombosis in OP against only 1 in NOP. Only 2 venous thrombosis were observed in OP versus 6 in NOP.

Post-surgical mortality is low. 4 patients died during 15 first days; 2 in each group, and more frequent in OP.

Discussion: As for other comorbidities, obesity is more frequent in candidates for renal transplantation (more than 20% of patients on waiting list in Nancy with BMI> 30). The rate of surgical complications is more important in these patients and need an important evaluation and preparation before transplantation.

P37-0004 NUPR1, A NEW MARKER OF TUBULAR CSA AGRESSION

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Introduction: The mechanisms of action and nephrotoxicity of cyclosporine (CsA) are still poorly understood. The study of rat renal tubular transcriptome identified a gene highly induced by CsA: *nupr1*. This gene encodes a transcription factor with an anti apoptotic action and interferes with the TGFb pathways.

The purpose of this study was to determine its renal tubular expression in mice and humans, to study its regulation after exposure to CsA and to test its role in the CsA nephrotoxicity.

Methodology: *In vitro*, induction of nupr1 was studied by PCR in immortalized human proximal tubular culture cells and in primary cultures of mice tubular cells exposed to CsA during 24 h, in increasing doses (0, 500, 1000, 5000 ng/ml).

In vivo, the induction was tested by PCR and immunohistochemistry on mice kidney previously treated with CsA (0, 60 or 100 mg/kg/J for 14d) and in humans on renal graft ofter transplantectomy. Mice invalidated for nupr1 were obtained to determine the role of nupr1 in renal agression induced by CsA.

Results: *In vitro,* in human and murine cell cultures exposed to CsA *nupr1* is induced dose-dependent manner in PCR, 2 to 10 times more than the solvent.

In vivo, we confirmed by PCR *nupr1* renal expression in mice and its mRNA increased in a dose dependent manner under CsA. PCR performed on human graft after transplantectomy revealed that *nupr1* is expressed in humans and immunohistochemistry showed nuclear staining of *nupr1* most important on diseased kidney than non-diseased kidney.

Conclusion: *Nupr1* is induced in renal tubular cells in rats, mice and humans after exposure to CsA *in vitro* and *in vivo*. It seems to be a good marker of tubular agression related to CsA. Its role in the kidney is under study.

P38-0011 ELECTROSTIMULATION (ENTERRA) FOR SEVERE GASTROPARESIS AFTER SUCCESSFUL COMBINED KIDNEY −PANCREAS TRANSPLANTATION

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Introduction: Gastroparesis is a neurologic complication of diabetes and occurs usually in patients with long-term hyperglycemia, often accompanied by microvascular complications.

Methods: In our diabetic population, 95 patients have been followed up for gastroparesis, 21 of which using electrostimulation (Enterra). Of these 95 patients (without Enterra device), 3 have needed a combined kidney/pancreas transplantation for the treatment of their diabetes with end-stage chronic kidney disease. Despite this combined transplantation, gastroparesis symptoms continued, in particular with difficulties i) in tolerating, and ii) in stabilizing trough levels and AUCs of immunosuppressant. Erythrocin was not used in association with immunosuppressants because of pharmacologic interference and domperidone was not efficient enough. We thus decided to implant these patients with Enterra devices after a delay of at least 6 months post-transplantation. The indication of Enterra therapy is gastroparesis proven on gastric emptying scintigraphy resistant to oral symptomatic treatment. Patients included are hospitalized for 1 week after the implantation in order to adapt their immunosuppressive treatment. The electrodes are implanted by coelioscopy in stomach wall (10 cm above pyloric junction), and are at 1 cm intervals. These electrodes are connected to a stimulator implanted in abdominal subcutaneous tissue. The median age of these 3 patients was 38 years and they had not received haemodialysis pretransplant; they all presented with dysautonomia and severe gastroparesis. All 3 patients received an induction therapy (basiliximab: $n = 1$; antithymocyte globulins: $n = 2$), plus tacrolimus, mycophenolate mofetil (MMF) and steroids, the latter being weaned-off in 2 cases. In one patient MMF was replaced by azathioprine because of villous atrophy.

Results: The three recipients are insulin-free at last follow-up i.e. median of 24 months (12−48). Their median serum creatinine at last follow-up is 114 μmol/l. None experienced infectious complications.

Conclusion: We conclude that it is feasible to implant gastric electrostimulation device for severe gastroparesis in succeeded kidney/pancreas recipients. Follow-up studies can allow estimating its efficiency on the absorption and tolerance of immunosuppresseurs therapy.

P39-0022 OUTCOME OF KIDNEY ± PANCREAS TRANSPLANTATION IN PATIENTS PRESENTING WITH HEPATOCYTE NUCLEAR FACTOR−1β MUTATIONS

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Introduction: Hepatocyte nuclear factor−1β (HNF1B) transcription factor plays a critical role in the development of kidney, liver and pancreatic islets. HNF1B mutations cause renal involvement that may progress to end-stage renal failure (ESRF), maturity-onset diabetes of the young (MODY) type 5, exocrine pancreatic failure and liver tests abnormalities.

Methods: Herein, we report outcome in five patients with HNF1B mutations following kidney (KT) or kidney + pancreas (KPT) transplantation. At transplantation, median age was 30 years, and 4/5 patients were on renal replacement therapy (for a median of 15 months). Prior to KT/KPT liver tests were normal except in one patient and pancreatic enzymatic supplementation was requested in one patient. Three patients with MODY-5 requiring insulin therapy underwent KPT, while two underwent KT alone given normal fasting glycaemia (HbA1C = 5.9%). All patients received an induction therapy (basiliximab: n = 1; antithymocyte globulin: n = 4), plus tacrolimus, mycophenolate mofetil and steroids.

Results: At last follow-up, i.e. a median of 18 months (1−24):

(1) One acute kidney rejection occurs and no acute rejection pancreas; the median serum creatinine is 162 μmol/l despite that two developed BKV-related nephropathy.

(2) The 3 KPTs are insulin-free with median HbA1c at 5% at one year post-transplantation. Conversely, the two recipients of KT alone, developed immediately post transplantation diabetes mellitus requiring intensive and long-term insulin therapy.

(3) Mild (n = 2) or severe (n = 20) liver cholestasis developed in four patients (2KPT and 2KT recipients). Hepatic biopsy did not show specific lesions. Its mechanisms were unknown, i.e. we searched for viral- or drug-related cause without success.

Conclusion: We conclude that in HNF-1B patients with ESRF, KT and KTP are feasible. Relying on our experience, 1) for non-MODY5 patients, better assessment of residual insulin secretion is desirable and immunosuppressive regimen should avoid diabetogenic drugs, 2) in all the patients, the mechanism and the long-term outcome of post-transplant liver cholestasis warrants further investigation.

P40-0121 RESULTS OF RENAL TRANSPLANTATION IN SOUTHERN TUNISIA

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Introduction: Kidney transplantation is steadily growing in Tunisia since the first transplantation performed in Tunis in 1986. In our department, we started this activity in 1994 and we have 300 cases up to June 2012. We propose to study our results mainly surgical complications.

Material and Methods: Our study is retrospective, about our first 300 kidney transplantations performed between April 1994 and June 2012. We studied the characteristics of donors, recipients, operative technique, surgical complications and survival. Our statistical analysis was performed with SPSS 18.

Results: The average age of recipients was 33 years (8–58). The sex ratio was 1.5. Patients benefited of hemodialysis for an average of 39 months. The grafts came from a living donor in 83% of cases. The arterial anastomosis was end to side type to the external iliac artery in 97.7% of cases. Sixty-five grafts (21.7%) had multiple arteries. The venous anastomosis was end to side type to the external iliac vein in 98.3% of cases. Urinary implantation was performed according Lich-Grégoire (90%) and Lead-Better-Politano (10%).

Urological complications were: urinary leak (4.7%), vesicoureteral reflux (2.6%) and ureteral stenosis (3.3%). One case of urinary leak was treated with double-J ureteral stent and all other cases required surgical reintervention.

Vascular and bleeding complications were dominated by hematoma (8.7%), arterial thrombosis (3%), venous thrombosis (1.3%), arterial stenosis (8.3%), and lymphoceles (6%).

Thirty-three patients died after 34 months on average (2 days–192 months), including 16 in the first year. The kidney graft was functional at death in 14 cases (42%). Among 267 survivors, 45 (16.9%) returned to dialysis after 31 months on average (0–129). A transplantectomy was necessary in 15 cases. Graft survival was 75% at 5 years and 60% at 10 years.

Conclusion: Successful kidney transplantation is synonymous of good collaboration between different teams. This allows timely detection of complications mainly surgical ones and their treatment.

P41-0126 PREGNANCY AFTER KIDNEY TRANSPLANTATION: PER AND POST PARTUM COMPLICATION IN ONE CENTER

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Introduction: Pregnancy after renal transplant has become a common event. We studied the management and complications of these pregnancies among the patients followed at the University Hospital of Strasbourg.

Methodology: We studied pregnancies between 1987 and 2012 among the renal transplant recipients (living or deceased donor) followed at the University Hospital of Strasbourg. Miscarriages and stillbirth were not included. The analysis focuses on obstetrical and renal complications during the per- and the post-partum, as well as the survival of the kidney graft.

Results: Thirty-eight pregnancies among 29 patients were studied. The average time between renal transplantation and conception was 4.8 ± 3.4 years (24 days–16.6 years). We found a high incidence of caesarean deliveries (19 cases out of 38) and some obstetrical complications: preeclampsia (22%), cholestasis of pregnancy (11%), premature rupture of membranes (18%), postpartum hemorrhage (8%), preterm delivery (39%). The mean delivery term was 37.1 weeks (31 to 42.7 weeks). Six cases of newborn malformation were observed (2 severe and 4 minor).

No acute rejection of the transplanted kidney was observed during pregnancy, but a high incidence of urinary tract infection was observed (21%).

Seven patients underwent a graft lost after an average time of 7.8 years after delivery. However, graft survival after pregnancy is good: 100% at 5 years, 74% at 10 years and 52% at 15 years after delivery.

Conclusions: Our results are comparable to those of international studies. Pregnancy after renal transplantation is at high-risk of obstetrical complication. The risk renal graft function impairment exists but the link with pregnancy is not established.

P42-0131 TRANSPLANT RENAL ARTERY STENOSIS: ABOUT 25 CASES

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Introduction: Arterial stenosis after renal transplantation became the most frequent vascular complication, varying widely from 1 to 17% depending on the availability of less invasive diagnostic imaging.

Material and Methods: We retrospectively analyzed data of 25 patients, among 300 kidney transplants between 1994 and 2012.

Results: The mean age was 31 years (17–57 years). We had 19 men and 6 women, with 22 transplants from living donors and 3 cadaveric donors. Renal grafts had single renal artery in 19 cases and multiple renal arteries in 6 cases. It was an end-to-side anstomosis in all cases. Artery stenosis occurred after an average of 5 months and half. It was revealed by hypertension in 7 cases and renal failure in 11 cases. It was without any symptoms in 9 cases. The diagnosis was suspected on doppler-sonography. It was confirmed by contrast angiography (4 cases) or tomography with vascular contrast (16 cases).

Two early stenosis required a surgical correction (refection of arterial anastomosis) with good evolution. We indicated conservative treatment for 15 patients. For the other cases, we underwent surgical treatment for 6 patients and angioplasty for 2 patients. For those patients, we have noted stabilization of the blood pressure and renal function in 21 cases and chronic graft rejection in one case. Three patients were deceased to pulmonary pneumonia in one case and hemorrhagic shock in two cases.

Conclusion: Transplant renal artery stenosis is the most common vascular complication after kidney transplantation. Successful surgical procedure does influence graft survivals and decrease surgical complication rates, especially with multiple renal arteries.

P43-0171 KIDNEY TRANSPLANTATION: CONDUCTS BEFORE AND POST TRANSPLANT OF RECIPIENTS WITH LIVE AND DECEASED DONORS FROM MINAS GERAIS STATE, BRAZIL

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Background: The specific antibodies against donor (DSA) have a fundamental role in the mechanism of kidney transplant rejection and represent one of the main barriers to the success of the transplant. DSA identification as prophylactic measure to prevent the hyperacute and acute rejection became mandatory procedure in the pre-transplant immunological evaluation.

Material and Methods: We evaluate a protocol in 229 kidney transplants with live and deceased donors from 2009 to January 2011. Recipients were classified as low, media and high immunological risk of rejection based on Panel Reactivity Antibody Single Antigen Bead (PRA-SAB) method to identify specific HLA class I, II antibodies, for some patients were performed in the pre-transplant, and the graft survival was evaluated after one year of transplantation.

Results: The recipients were classified before transplantation as 158(69.00%) non-sensitized (NS), 66 (28.82%) sensitized without DSA, and 5(2.18%) with DSA. Those that were transplanted with kidneys from living donor 129 (56.33%), 106 did not experiment rejection episodes and 23 patients had rejections, of them 19 maintain kidney functioning and four loss grafts. Of the 100 (43.67%) recipients that received kidney from decease donors 66 had not experiment rejection episodes and 23 patients rejected, 16 of them had rejected reversed by treatment maintained functioning kidney, and 7 patients loss the grafts, but 4 were by non-immunological causes. The survivals rates were demonstrated with live donors for NS, and sensitized NDSA 97.60%, and 94.10%, respectively. For deceased donor the recipient NS, NDSA and DSA had 91.22%, 78.75% and 80.28% of one first year survival, respectively.

Conclusions: Using this protocol it was possible to use accurate immunological evaluation of recipients and donors, stratification by risk of AMR, monitoring of post transplant HLA antibodies to avoid AMR episodes, and thereby increase graft survival.

P44-0185 KIDNEY TRANSPLANTATION IN PATIENTS WITH MENTAL RETARDATION

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Introduction: Mental retardation (MR) is not currently considered as a contra-indication for renal transplantation (RT)., except for severe ones. Series published are always small, because of difficulties to organise peri-operative survey and immunosuppresive treatment compliance.

We report here observations of patients with MR, sometimes severe, who received RT.

Methods: All the datas were extracted from DIVAT database.

Results: Between 1991 and 2010, 12 RT were realized in adults patients with moderate to severe MR. Sex ratio is 8 men and 4 women, aged 35.7 ± 13.5 years. It is the first RT for 10 patients, the second and third one for the 2 others. 50% were RT with living donor.

Renal graft worked immediatly in 8 cases, but graft function was delayed in only one recipient with living donor RT.

Post operative period was only marked by lymphocele in 3 cases and hematoma in 2 cases, with no necessity of surgical correction.

Only 2 patients experienced rejection, with only one proved by biopsy.

At one year, patient and graft survival was 100%, with median serum creatinin = 125.6 ± 24 μmol/l and clearance mesured of 24 h urine collection = 59.7 ± 19 ml/min.

Over one year, one patient died 3 years after RT in a context of septicemy. 2 others returned to dialysis : one after 23 month because of glomerulopathy recurrence and another after 19 years of RT.

Discussion: These data show that RT in patients with MR is possible, even in someone severe cases, if comforting conditions are present.

These good results complete those already obtained in 8 other RT performed before in children between 1977 and 2009.

P45-0048 KIDNEY TRANSPLANTATION FROM LIVING DONORS

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Introduction: Renal transplantation (RT) from a living donor is a better prognosis. The objective of our study was to report the epidemiological, clinical and biological characteristics of donor and recipient, the immunosuppressive protocols used and the overall patient survival and graft.

Materials and methods: Retrospective study from June 1998 to February 2012 of 64 kydney transplant patients from living donor. We excluded cases of hyperacute rejection, thrombosis of the renal graft artery and patients transplanted outside our center.

Results: The mean age of recipients was 31.2 ± 10 years. The sex ratio was 1.9 (42H/22F). Patients had uropathy in 25% of cases, glomerulopathy in 17.2% of cases and indeterminate nephropathy in 57.8% of cases. The mean duration of dialysis before transplantation was 30 months: hemodialysis in 95.3% of cases and peritoneal dialysis in 4.7% of cases. For all patients, it was their first transplantation. The mean age of donors was 41.1 ± 12 years, 96.9% were related. We noticed female predominance (44F/20H). Average number of HLA incompatibilities is 2.4 ± 1.3. A past history of immunization before transplantation was founds in 59.4% of patients. The warm ischemia time was 54.8 ± 15 min. Induction therapy is based on : corticosteroids in 100% of cases , cyclosporine in 95% of cases, mycophenolate mofetil (MMF) in 73% of cases, azathioprine (AZA) in 26.6% of cases, tacrolimus in 4.7% cases, basiliximab in 9.3% and anti-lymphocyte immunoglobulin in 1.5% of cases. 12 patients (18.8%) had delayed graft function and acute rejection (AR) was found in 16 cases (25%). At one year of follow up, we observed a graft and patients survival rate of 100%. After 7 years, the survival rate decreased to 95.3%. The mean follow-up time was 86 months. For respectively 1, 6, 12 and 86 months of follow-up, the mean serum creatinine values were 15.2 mg/l ± 7.5, 14.5 mg/l ± 6.1, 14.2 mg/l ± 5.3 and 16.2 mg/l ± 11.3.

Conclusion: Transplantation from living donors offers an excellent short and long-term prognosis.

P46-0099 ENCAPSULATING PERITONEAL SCLEROSIS IN KIDNEY TRANSPLANT RECIPIENT WITH FAVOURABLE OUTCOME AFTER CORTICOSTEROIDS AND TAMOXIFEN THERAPY

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Introduction: Encapsulating Peritoneal Sclerosis (EPS) is a rare condition seen in Peritoneal Dialysis (PD), and many times with a fatal course.

The etiology is unknown, although it is believed to be multifactorial, standing out the time from onset of peritoneal replacement therapy, greater use of hypertonic solutions to keep adequate ultrafiltration rates, and the presence of previous peritonitis.

We report a case of EPS occurred in the first months after renal transplantation in a patient previously treated with PD, with a particularly favourable evolution after using high-dose corticosteroids and tamoxifen.

Case report: A 47 years old woman underwent renal transplantation 5 months ago, was hospitalized for swelling of the abdomen with discomfort, anorexia and weight loss.

Previously, she had been treated with PD for six years; dialysis was adequate and the patient has never had peritonitis. The solutions used were exclusively based on glucose isotonic for 3 years. The introduction of hypertonic solutions was from the fourth year. The icodextrine was involved during the nine months preceding transplantation. The dialysis catheter was removed 3 weeks after transplantation. The immunosuppressive regimen consisting of tacrolimus, mycophenolate mofetil, and corticosteroids.

Physical examination indicated the presence of ascites and the biological tests showed inflammatory syndrome, anemia and hypoalbuminia.

Ultrasound and CT scan of the abdomen showed large amount of ascites. Biochemically, this ascites was an hematic exsudate. Cultures remained negative and research of neoplastic cells and BK was negative.

Because EPS was suspected, a laparoscopy was performed. The surgeon noticed a clearly thickened peritoneum as well as a thick fibrinoid layer covering the bowel mass. Peritoneal biopsy showed a thickened connective tissue layer without any signs of acute inflammation, fitting with EPS.

After treatment with prednisone 0.5 mg/kg /day and tamoxifen 40 mg/day through 6 months, the outcome was favorable with disappearance of ascites and inflammation and improving in general health.

Discussion and Conclusion: The occurrence of EPS after kidney transplantation in patients previously treated with PD is possible. Its onset is often early in the first 6 months post-transplantation.

The discontinuation of PD and immunosuppressive agents like calcineurin inhibitors are specific risk factors after kidney transplantation.

Our observation is also an illustration of the ability to use successfully and without impact on the graft, the association steroids and tamoxifen in renal transplant recipients with EPS.

P47-0113 IS THERE A DIFFERENCE IN GRAFT OUTCOME BETWEEN CADAVER AND LIVING TRANSPLANTATION?

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Introduction: It is usually thought that the result of cadaver kidney transplantation is inferior to living transplantation. The aim of our study is to compare surgical results and graft survival between cadaver and living transplantation in our center.

Material and Method: We retrospectively analysed data from 300 kidney transplants performed between 1994 and 2012. Renal grafts were divided into 2 groups:

Group 1: 250 from living donors.

Group 2: 50 from cadaveric donors.

The 2 groups were compared regarding: acute rejection, vascular and urological complications. Patient and graft survival were compared between these 2 groups using Kaplan-Meier survivorship curves and log rank test.

Results: There were 153 male and 97 female in Group 1while there were 29 male and 21 female in Group 2. Average age in Group 1 was 32 (8−58) and 35 (13−54) in Group 2. All of the kidneys harvested in living group were done by open surgery nephrectomy and were transplanted after an average of 37 min (8−105). Cadaver transplantation was performed after an average of 23 h (after harvesting of the cadaver kidney). Both groups were comparable regarding: acute rejection (*P:* 0.1), vascular (*P:* 0.6) and urological complications (*P:* 0.5). Transplant function as well as graft survivals were comparable in both groups : one year and 5 years graft survival were 89% and 75% in Group 1 and were 82% and 71% in Group 2 with no significant difference (*P:* 0.2).

Conclusion: Cadaver kidney transplantation can give patient and graft survival similar to living transplantation if the harvested graft is transplanted to the recipient without prolonging cold ischemia time.

P48-0116 INFLUENCE OF ADVANCED AGE OF THE DONOR ON THE EVOLUTION OF RENAL TRANSPLANTATION

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Introduction: Regarding to increasing number of patients with renal failure, recourse to marginal donors may be required. The aim of this study is to determine influence of advanced age of kidney donors on the graft outcome.

Material and methods: Retrospective unicentric study of 300 kidney transplantations operated between 1994 and 2012. Graft receivers were divided into 2 groups according to the age of donors:

Group 1 = age of donor lower than 50 years (mean: 34): 208 cases.

Group 2 = age of donor higher or equal to 50 years (mean: 55): 92 cases.

Pearson and Chi-square tests were used for statistical comparison. Graft survivals were compared between the 2 groups using Kaplan-Meier survivorship curves and log rank test.

Results: The mean age of the receivers was 32 years (8–57) for G1 and 33 years (16–58) for G2. Both groups were comparable regarding: acute rejection (G1: 8.3% G2: 13.1% P:0.2), vascular complications (G1: 20.7% G2: 17.4% *P*:0.5) and urological complications (G1: 10% G2 : 14% *P*:0.3) if compared globally and individually. Graft Survivals were slightly lower in group 2: at one year and 5 years, graft survivals were respectively 89% and 77% in Group 1 and were 86% and 65% in Group 2 with no significant difference (*P:* 0.06).

Conclusion: Although considered at high-risk, renal transplantation from older donors appears to have satisfactory results. Older donors can be selected according to well defined criteria to prevent organs shortage without compromising graft function or receiver survivals.

P49-0149 URINARY LEAK AFTER KIDNEY TRANSPLANTATION

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Introduction: Urinary leaks are reported in 1–3% of renal transplants. The two most common causes are ureteral ischemia with necrosis and surgical technical error. Our objective is to study urinary leak after kidney transplantation and their characteristics.

Material and Methods: We report 14 cases of urinary leak complicated kidney transplantation from 1994 to 2012, among 300 patients who underwent transplantation.

Results: The mean age was 30 years (15–54). Only one patient had vesicoureteral reflux. The ureteroneocystostomy was performed using the Lich-Gregoir technique in 13 cases (92.8%) and the Politano-Leadbetter technique in one case (7.1%), with a use of an externally ureteral stent in 10 cases. Urinary leak occurs after an average of 8 days (0–30). A significant correlation was found between leak and urinary infection ($P = 0.02$). The urinary leak' treatment consisted in double-J ureteral stent in one case and in surgical reintervention in the other cases. Among these cases, there were 2 extended necrosis of the ureter, 9 distal necrosis of the ureter and 2 imperfect ureterovesical anastomosis. These patients were treated with ureteroneocystostomy using the Leadbetter-Politano reimplants in 11 cases and with ureteropyelostomy using the ipsilateral native ureter in the other case. Postoperatively, one patient developed sepsis caused by brain abscess which caused his death and, in another case, a vesicoureteral reflux occurred, treated by reconstructive surgery using ureterovesical reimplantation but ureteral leak reappeared and ureteropyelostomy using the ipsilateral native ureter was performed with a good result.

Conclusion: Urinary leak is not very frequent complication after kidney transplantation. It can be reduced by preventive measures. Preservation of periureteral tissue and vascularization is essential.

P50-0150 PEDIATRIC KIDNEY TRANSPLANTATION: THE FIRST MOROCCAN SERIE

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Introduction: The kidney transplantation is the best treatment for the end stage kidney disease especially for children.

In fact, comparing to dialysis it favors a better growth, reduce to the maximum the restraints of treatment or diet and it permits a normal schooling and therefore an excellent social rehabilitation for the child.

In morocco, thanks to cooperation with agence de biomedicine (ABM), the program of pediatric kidney transplantation started in CHU of Casablanca during 2007.

Methodology: It concerns a descriptive study of all kidney transplantation cases in CHU of Casablanca and the regular monitoring consulting pediatric nephrology, the aim is to describe clinical, operational, therapeutic characteristics and its evolution in these child cases.

Results: The first pediatric kidney transplantation was performed in CHU of Casablanca in June 2007. A series of 11 transplantations was performed until June 2012.

The average age of our patients was 10.68 years (6.5–16 years) , with sex ratio M/F 0,3.The average weight was 32.2 kg, 2 children weighing less than 20 kg.

The causal nephropathy were: Kidney hypodysplasie (3cases), neurological bladder (2 cases), glomerulopathy (2 cases), Alport syndrome (1 cas), vesico-ureteral ebb (1 cas), undefined (1 cas). In 2 cases the kidney transplantation was preemptive, and in 9 other cases it was after an average of 16 months in peritoneal dialysis.

The donor was in 100% of cases of a living parents, mostly one of the 2 parents with an average of 45 years old. A nephrectomy was indicated before for seven children. The cold ischemia time was about 146 mn (4 h66mn) and for the warm ischemia time about 59 mn.

The immunossuppressor treatment was in induction based on basiliximab and methylprednisolone for all the children and then only mycophenolate mofetil or associated with tacrolimus for 9 patients.

The progression showed a normal plasma creatinine in a delay of 24 h for 5 children, with minimum plasma creatinine of 6.03 mg/l. The average hospitalization time was 11 days. After an average of 17 months, the plasma creatinine was about 8.09.

''A growth catch up'' was also observed.

Conclusion: Even thought, the pediatric kidney transplantation activity is still beginning in morocco, the first results in CHU of Casablanca are promising and encourage on training the pediatric kidney transplantation team and why not extend this activity to all the other Moroccan hospitals.

P51-0151 VASCULAR THROMBOSES AFTER RENAL TRANSPLANTATION

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Introduction: Vascular thromboses after renal transplantation becomes rare but remains serious with generally the loss of the graft. Our objective is to study the ethiopathogenic, epidemiologic and therapeutic aspects of this pathology.

Material and methods: Retrospective study of 300 kidney transplantations carried out over 18 year's period (1994–2012). All cases of vascular thromboses were reviewed.

Results: Vascular thromboses were noted among 13 patients (10 men and 3 women). The mean age was 36 (14–54). A patient was coronary with repeated thromboses of the arteriovenous fistulae. A patient had history of retina vein thrombosis without homeostasis disorder. Artery and vein were sewn end-to-side to external iliac vessels for all patients.

Arterial thrombosis was noted in 9 cases, with multiple renal arteries graft in 3 cases. This complication was noted during transplantation in 1 case, requiring the refection of arterial anastomosis. In the 8 other cases arterial thrombosis was revealed by post operative anuria, between 8th hour and 16th day. All patients needed a return to haemodialysis. The diagnosis was suspected on Doppler-sonography, confirmed by TDM in 2 cases and RMI in 1 case. A transplantectomy was necessary in 6 cases.

Venous thrombosis was noted in 4 cases. It was suspected during surgery in 1 case, requiring refection of the venous anastomosis. The patient was deceased after 2 days secondary to pulmonary embolism. In the 3 other cases, this complication appeared by a break of diuresis after 1, 2 and 9 post-operative days respectively. A surgical exploration finds a cyanosis kidney in the 3 cases. The surgery consisted on repair of the vascular anastomosis in 1 case, while a transplantectomy was necessary in the 2 other cases.

Conclusion: Vascular thrombosis is the most frightening surgical complication of renal transplantation. Once the diagnosis is made, a surgical exploration must be tried rapidly to save the graft and his function.

P52-0160 DOUBLE-STEP IMMUNOADSORPTION DURING ABO INCOMPATIBLE KIDNEY TRANSPLANTATION

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The kidney transplantation with living ABO incompatible (ABO-i) donor is performed with success since many years. However, the presence of high isoaglutinine titer (beyond 1/64) is an immunologic barrier. The plasmapheresis sessions are proposed but their efficiency is sometimes limited.

We report two clinical cases where sessions of immunoadsorption (Iads) with double-step were made during ABO-i transplantation with a high isoaglutinine titer. These sessions have associated two semi-selective columns of protein A sepharose (Immunosorba®, Fresenius) with one selective column against isoaglutinine (Glycorex®, Sweden). The immunosuppressive therapy consisted on Rituximab®, corticosteroid, Tacrolimus, Mycophenolate mofetil and induction with Thymoglobulin, Solumédrol bolus and Intravenous Immunoglobulin.

The first patient had a O group with living-donor A1 group. The isoaglutinine titer initially was very high at 1/512. Five sessions of double-step Iads were performed during one week. The isoaglutinine anti-A titer has decreased at 0. The transplantation was performed on 23/11/2011. Since, the plasma creatinine is stable at 100 μmol/l with a titer of isoaglutinine anti-A between 1/2 and 1/4.

The second patient had a O group with living-donor A2 group. He has been transplanted with low titer of isoaglutinine anti A at 1/4ème with conventional plasmapheresis. The kidney function was improved to 130 μmol/l. At D15 (four days after the last plasmapheresis session), an acute humoral rejection was diagnosed after graft biopsy because the plasma creatinine had increased at 500 μmol/l. The isoaglutinine titer had risen at 1/64. Despite five sessions of conventional immunoadsorption, the isoaglutinine titer had not changed. Five sessions of double-step Iads were performed during one week. The isoaglutinine titer has decreased to 1/4 with improved plasma creatinine at 150 μmol/l.

These two cases underline the importance of double-step Iads for ABO-I transplantation. The high cost of this aphaeresis technique limits its use in the case where level of isoaglutinine titer remains high despite conventional plasmapheresis.

P53-0164 VALIDATION OF A FRENCH SELF-ADMINISTRATED QUESTIONNAIRE ABOUT QUALITY OF LIFE IN RENAL TRANSPLANT RECIPIENTS TRANSPLANTED FOR LESS THAN 12 MONTHS

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Introduction: Quality of life (QOL) of renal transplant patients has substantially evolved with kidney transplantation. Evaluation of QOL appears essential to help new medical and medico-economical decisions. The Renal Transplant Quality of life questionnaire (RTQ), in the French language, has been developed and validated in 2008 thanks to a group of renal transplant patients with a post-transplantation delay of more than one year. The objective of this study is to execute an extension of the validation of the RTQ for patients transplanted for less than one year with data from EPIGREN study.

Methods: EPIGREN study is a French multicenter cohort of renal transplant patients followed during 3 years. Patients included have been evaluated regularly at M1, M3, M6, M9 and M12 post-transplantation using both the specific RTQ and the generic QOL SF36 scale. Five dimensions were analysed with RTQ self-administrated questionnaire: Physical Health (PH), Mental Health (MH), Medical Care (MC), Fear of losing the Graft (FG) and Treatment (TR); whereas SF36 scale evaluates, in particular, 2 dimensions: Physical Composite Score (PCS) and Mental Composite Score (MCS). Statistical analysis has been performed with SPSS 19 software. Confirmatory analysis has been done with LISREL software.

Results: At M1, 334 renal transplant recipients with a mean age of 53.8 ± 13.2 years have been included, with a majority of men (63.2%). During the first year post-transplantation, QOL scores increase significantly with both SF36 and RTQ (+1.9 and +8.7 points for MCS and PCS, respectively; +10.2, +2.6, +1.3, +0.6 for PH, FG, TR, MC, respectively), except for MH RTQ dimension (–2.5 points). The strong increase in the first months is probably due to post-transplant euphoria. Factor structure at M9 is similar to M12 with a total variance of 51% and Cronbach alpha coefficient ranging from 0.7 to 0.9 for the 5 RTQ dimensions. So, principal component analysis shows a stability of RTQ at M9.

Conclusion: The RTQ questionnaire is validated for patients transplanted for more than 9 months and can now be used in clinical practice. However, analysis is still ongoing for patients with a shorter post-transplantation delay.

P54-0183 OPTIMIZATION OF THE THERAPEUTIC CARE OF KIDNEY TRANSPLANT PATIENTS, TOWARDS A SHARED CONSULTATION PHYSICIAN/CLINICAL PHARMACIST?

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Introduction: Kidney transplant patients are at particular risk of iatrogenic disease and therefore must be the object of regular supervision. One literature review, centred on the pharmaceutical services, highlights a field of investigations open to the initiatives and to their evaluations. So, it seems relevant to us to estimate the feasibility of a shared consultation physician/clinical pharmacist and the impact of the generated pharmaceutical intervention.

Methods: A prospective study over a period of 1.5 months was conducted (June-July, 2012). Successive kidney transplant patients were selected either from consultations or from the day hospital. Then, their descriptive sociodemographic, physiopathological, and therapeutic data1 were collected during a pharmaceutical interview preceding the medical consultation. A pharmaceutical synthesis and opinion were passed to the nephrologist before consulting with the patient.

Results: A total of 53 kidney transplant patients were included, with an average age of 58.79 ± 11.60 years. We found that patients had received a transplant an average of 9.90 ± 7.6 years ago. The average number of prescribed medicine is 10.1 ± 3.9. The majority of patients (84.9%) stated that medicinal explanations were given mainly by their doctor (57.8%) and/or pharmacist (33.3%). Nevertheless, 52.8% of them only partially understood their medicine and 24.5% did not recognize at least one of the prescribed immunosupressives. 52.8% of patients stated some side-effects of their immunosupressives, mainly cutaneous cancer (32.1%). 10.3% of patients stated that they regularly took generic immunosupressives. 75.4% presented a minor or major problem of observance. The average satisfaction score regarding their treatment was estimated at 8.8/10. Twelve pharmaceutical interventions were done, of which almost half were accepted.

Conclusion: This innovative work emphasizes the interest of pharmaceutical expertise to identify drug-related problems regarding the optimisations accessible to intervention and to pharmaceutical care. It also invites reflection on the remote impact of the pharmaceutical services as well as on pharmaceutical counselling at discharge required for the continuity of pharmaceutical care.

P55-0010 EPISODES OF HYPOGLYCAEMIAS REPEATED AFTER TRANSPLANTATION KIDNEY PANCREAS AT DIABETICS OF TYPE 1

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Introduction: The arisen of hypoglycaemias was observed at the diabetic's of type 1 having benefited from a pancreatic transplantation. We reported the experience of the TEACHING HOSPITAL of Toulouse concerning this phenomenon.

Methods: The clinical demonstrations repeated by hypoglycaemias (HypoEpisod) were systematically looked for by interrogation, to the DT1, weaned in insulin after double transplantation Kidney-pancreas. The clinical and biological characteristics of routine of 5 patients having reported HypoEpisod (Hypo +) were compared with a group of 9 transplanted without hypoglycaemia (Hypo-) [tests of Mann-Whitney and exact of Fisher].

Results: 4/5 patients Hypo + reported capillary glycaemia < 3.4 mmol/l during HypoEpisod. A patient presented several severe hypoglycaemias. During HGPO, the minimal glycaemia values are lower in the group Hypo + (3.1 vs. 4.4 mmol / l; $P = 0.02$) and 4/5 patients Hypo + against 0/5 Hypo-presented glycaemia < 3.3 mmol/l ($P = 0.05$), among which 1 with neurological demonstrations. The patients Hypo + do not distinguish themselves from the group Hypo-by the age, the duration of the diabetes, the HbA1c, type of venous drainage of the pancreatic transplant, the secretion or the sensibility in the basal insulin (HOMA2-B and-), or the renal function. On the other hand, all present an advanced neurovegetative infringement (achievement) (score of Ewing: 4.7 vs. 2. 7; $P = 0.01$), in particular a gastroparesis (5/5 vs. 0/9; $P < 0.01$), confirmed by scintigraphy, particularly severe for 3/5 which benefit of stimulating gastric one implanted.

Conclusions: It seems to have a link enters gastroparesis and arisen hypoglycaemias in the fall of a transplantation kidney-pancreas. These results must be confirmed and follow-up studies are necessary to understand mechanisms.

P56-0046 HYPERTENSION AFTER KIDNEY TRANSPLANTATION

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Introduction: Hypertension (HTN) is the most frequent non-immunological complication in renal transplantation in both adult and pediatric patients. It is a major cardiovascular risk factor and and is responsible for a shortening of the survival of the graft.

Objective: The aim of our work is to determine the frequency and characteristics of hypertension in our population of renal transplant patients, and the challenge of its management.

Methods: Retrospective study of 81 renal transplant patients from 1981 to 2012, with a follow-up period of at least one year. Hypertension is defined as SBP> 130 mmHg and/or DBP> 80 mmHg and/or taking antihypertensive treatment.

Results: The average age of our patients was 39 ± 14 years, with a sex ratio (M / F) of 1.6 and a amean duration of dialysis 37 months. Transplantation was performed in 62 cases (76.5%). 19 patients had transplantation abroad (23.5%).It is a transplant from cadaver kidney in 12 cases (15%), and a kidney transplant from living donors in 69 cases (85%).The donor is mother or sister in 64.8% of cases with a mean age of 41 ± 12 years. During dialysis, 70% of patients were hypertensive. Immusuppresseur treatment is based on corticosteroids and cyclosporine in 85% of cases, corticosteroids and tacrolimus in 15% of cases associated with mycophenolate mofétyl in 81% of cases or azathioprine in 19% of cases.The prevalence of hypertension was 83% (67 cases) one month after tranplantation and 44% (36 cases) 12 months after. Stenosis of the renal artery graft was found in 26 patients. 6 patients were treated with angioplasty, three of them had stenting. Drug therapy is based on ACE inhibitors or angiotensin II receptor antagonists in 67% of cases, calcium channel blockers in 40% and beta-blockers in 16% of cases. Monotherapy was needed in 45% of cases, combination therapy in 37% of cases and triple therapy in 13% of cases. After a mean follow-up of 88 ± 47 months, 94% of grafts are functional, with a mean serum creatinine of 14 ± 7 mg / l. We observed three cases of acute coronary syndrome and one case of stroke.

Conclusion: hypertension after renal transplantation is common and multifactorial. It is a powerful risk factor for cardiovascular disease and is associated with decreased patient and graft survival. Its proper management is crucial.

P57-0056 DELAYED GRAFT FUNCTION IN KIDNEY TRANSPLANTATION FROM LIVING DONORS

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Introduction: The incidence of delayed graft function (RRFG) in renal transplantation from living donors varies between 1.7% and 5%. The purpose of this study is to determine the epidemiological, clinical, biological and outcome characteristics of RRFG.

Methods: Retrospective study from June 1998 to February 2012 of 12 patients with an RRFG among the 69 kidney transplant recipients from living donors. We excluded cases of hyperacute rejection and thrombosis of the renal graft artery. The RRFG is defined by the need for dialysis within the first week post-transplantation or serum creatinine> 30 mg/l on the fifth day after surgery.

Results: 18.8% of our patients had RRFG, 12% required dialysis. The mean age of recipients is 34.1 ± 9.4 years with male predominance (11H/1F). Patients had uropathy in 8.3% of cases, glomerulopathy in 33.4% of cases and indeterminate nephropathy in 58.3% of cases. The mean duration of dialysis was 30 months. For all patients, it was their first transplantation. In all cases, the duration of cold ischemia was less than 2 h. The mean age of donors was 41.1 ± 15.4 years. All donors are related. There was a female predominance (7F/5H). The average number of HLA incompatibilities is 3 ± 1.2. The search for HLA antibodies was negative in all patients. A history of immunization before transplantation was noted in 33.4% of patients. Mean serum creatinine at the time of RRFG is 32.4 mg/l ± 22.4. Induction therapy included corticosteroids in 100% of the cases, cyclosporine 91.7%, tacrolimus 8.3%, mycophenolate mofetil (MMF) 83.3%, azathioprine (AZA) 16.7% and Basiliximab 8.3%. At one year of follow up, we observed a graft and patients survival rate of 100%. After 7 years, the survival rate decreased to 83.4%. The mean follow-up time was 80 months. For respectively 3, 6, 12 and 80 months of follow-up, the mean serum creatinine values were 18.2 mg/l ± 9, 19 mg/l ± 8.8, 18 mg/l ± 8.4 and 23.7 mg/l ± 20.7. After statistical analysis, risk factor for RRFG were HLA incompatibility ($P = 0.04$) and sex of recipient ($P = 0.007$).

Conclusion: RRFG causes additional costs because of prolonged lenth of hospital stay, need for dialysis, increased risk of acute rejection and negative impact on long-term graft survival. Several risk factors favor this complication.

P58-0091 EARLY CONVERSION FROM TWICE DAILY TACROLIMUS TO THE ONCE DAILY EXTENDED FORMULATION IN RENAL TRANSPLANT PATIENTS BEFORE HOSPITAL DISCHARGE

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In Europe, once daily tacrolimus (ADVAGRAF™) is approved in renal transplantation to be used immediately after the surgical procedure. As compared to the conventional twice daily tacrolimus, this extended-release formulation is however less flexible for the initial period of transplantation during which many dose adjustments can be necessary. For this reason, we have implemented in our centre a strategy of delayed conversion from PROGRAF™ to ADVAGRAF™ after the first week post-transplant. As part of this strategy, patients are converted before their hospital discharge in order to ensure (i) that exposure to tacrolimus has not been modified by the switch and (ii) that all patients have undergone their therapeutic education under ADVAGRAF™.

We report here our experience of early conversion to ADVAGRAF™ in renal transplantation.

We evaluated tacrolimus exposure (trough levels), dose adjustments over time, as well as the efficacy and safety of an early ADVAGRAF™ conversion strategy (ADVAGRAF™ group) as compared to a conventional PROGRAF-based regimen (PROGRAF™ group). Patients concomitantly received steroids and mycophenolate mofetil in both groups along with a sequential induction therapy.

Forty eight transplanted pts were included in each group (69% male, mean age 54). Conversion to ADVAGRAF™ was initiated on average at 12.4 days post tx. Mean (±SD) tacrolimus dose was 7.8 (±3.1) mg/day and 8.5 (±3.3) mg/day before and after the conversion, respectively (NS). Tacrolimus exposure was not significantly impacted by ADVAGRAF™ conversion (tacrolimus C0 of 8.2 ng/ml and 7.5 ng/ml, respectively). No difference between the 2 groups was observed at one year post-transplant, regarding occurrence of acute rejection, level of renal function, mean albuminuria, occurrence of new onset diabetes and proportion of patients with hypertension and hypercholesterolemia. One year post-transplant patient and graft survival was similar in both groups.

Early conversion from PROGRAF™ to ADVAGRAF™ after the first week post-transplant is feasible without significant impact on tacrolimus exposure. This strategy appears to be safe and well tolerated and might represent an alternative to the immediate post-transplant introduction of ADVAGRAF™.

P59-0118 TUBERCULOUS ACUTE APPENDICITIS AFTER RENAL TRANSPLANTATION IN THE RIGHT ILIAC FOSSA: A CONFUSING DIAGNOSIS AND A RARE ETIOLOGY

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Introduction: Tuberculosis (TB) remains frequent in endemic countries where it contributes to both increased morbidity and mortality, particularly in immunocompromised patients such as organ transplant recipients.

TB of the gastro-intestinal tract represents only 3% of cases of extrapulmonary forms. Although the ileo-cecal region is the most affected part in digestive tract, tuberculous appendicitis is a rare entity.

Case report: A 25 year old man was hospitalized in Mai 2011 for fever and abdominal pain. He had preemptive kidney transplantation 2 years and a half earlier for malformative uropathy. Graft was placed in the right iliac fossa. The immunosuppressive regimen consisting of prednisone, mycophenolate mofetil and tacrolimus.

Physical examination revealed widespread abdominal tenderness, more important in right lower quadrant abdominal and in the graft. The Biological tests showed inflammatory syndrome, normal graft function and negative urine culture. Chest X-ray and ultrasonographic study of her abdomen were normal. An empirical antibiotic treatment was started but without effect.

In the absence of improvement, abdomino-pelvic CT scan was performed 2 days later, disclosed appendiceal abscess. An appendectomy was performed, histopathological examination revealed a phlegmonous appendix and pus culture was positive for mycobacterium tuberculosis.

Tuberculous acute appendicitis is retained in the absence of other sites (pleuro-pulmonary, genitourinary ...). Chemotherapy for TB was started and continued for 9 months with favourable outcome.

Discussion and conclusion: Appendicular tuberculosis has been rarely reported, predominantly in young subjects. It often presented, as in our case, by a non-specific acute appendicitis making diagnosis difficult and delayed care exposing the patient to serious complications sometimes.

In kidney transplant recipients with a graft placed in the right iliac fossa, acute appendicitis is more difficult to diagnose because often mistaken, at least initially, for pyelonephritis or acute graft rejection. We note also, on this ground, the difficulties of managing interactions between anti-TB drugs and immunosuppression.

P60-0124 POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME (PRES) AFTER KIDNEY TRANSPLANTATION

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Introduction: Posterior Reversible Encephalopathy Syndrome (PRES) is a recently individualized clinico-radiological syndrome. Its neurological or neuropsychiatric symptoms are not specific; however, neuro-radiological signs are characteristic.

Pathophysiology of PRES involves cerebral edema because of extravasation of fluid from the cerebral vasculature; however, the exact mechanism that leads to this process is not well understood. If the main triggering factor is an acute rise in blood pressure, causes of "PRES" are multiple.

Cases report: Two kidney transplant recipients, one woman (case 1) and a man (case 2), respectively aged 22 and 25 years, transplanted since 9 and 3 years ago, were admitted for acute rejection. Immunosuppressive regimen consisting in prednisone and mycophenolate mofetil combined with cyclosporin in the first case and tacrolimus in the second case.

In the two cases, a cure of high-dose methylprednisolone and anti-lymphocytes immunoglobulins for 7 days was established with resuming their usual treatments. After a delay of four days (case 1) and 3 months (case 2), the 2 patients develop a sudden onset of severe headache, vomiting followed by a generalized seizure, associated with agitation, behavioral and severe memory disturbances in the first case and complete loss of vision with no perception of light bilaterally in the second case.

Physical examination revealed high blood pressure only in the second case; no metabolic or infectious favoring factors could be observed in our patients. MRI showed in the 2 cases signal changes consistent with PRES.

Evolution was progressively favourable. MRI control performed at one month in the second case showed a marked regression of abnormal signal.

Discussion and conclusion: In solid organ transplant recipients, the diagnosis of PRES in case of acute encephalopathy must be suggested. Hypertension is the leading cause of PRES but immunosuppressive therapy, mainly calcineurin inhibitors and monoclonal or polyclonal antibodies, may be involved as in the case of the first patient.

The outcome is favourable, based on an early and appropriate care with strict equilibration of blood pressure and/or reduce or even switch the immunosuppression involved whenever possible.

P61-0014 THE PORCELAIN KIDNEY GRAFT

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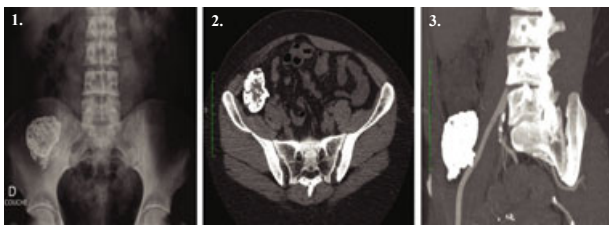
A Melanesian 38–year-old hemodialysis women was evaluated for a second kidney transplantation. The causal nephropathy was a glomerulonephritis at the age of 19 years. Systematic Abdominal X-ray (Figure 1) and CT scan (Figure 2 and 3) performed to screen potential vascular calcifications showed a whole calcification of the previous allograft in the right iliac fossa. Surprisingly, very few iliac vessels calcifications were seen, contrasting with diffuse calcification of the graft and the allograft vessels. No calcifications of the native kidneys are seen. She hasn't got any residual diuresis. She has no clinical signs related to this "white ceramic" kidney graft. Figure 1 shows diffuse calcification of the kidney graft, without any calcification in native kidneys. Figure 2 and 3 show diffuse kidney and allograft vascular calcification. Figure 1 and 2 show that aorta and native iliac arteries are not calcified in contrast to allograft vessels. Because of an awkward discontinuation of her immunosuppressive therapy, she returned to hemodialysis 3 years only after a first living related kidney transplantation. Anti-HLA donor specific antibodies were found positive when she returned to dialysis. A severe hyperparathyoidism (PTH = 1700 pg/L) after graft loss required subtotal parathyroidectomy at the age of 28. Severe symptomatic hypocalcemia and hypophosphoremia occurred in the post-operative period. Her current blood tests are as follow : low calcium level (2.0 mmol/L), high phosphate level (1.6 mmol/L), moderate intact parathyroid hormone (PTH) level (172 pg/l) and normal alkaline phosphatase level (67 UI/L). Incidence and physiopathology of this complication are unknown. We hypothesize that calcification of the kidney graft and graft vessels are the consequence of an acquired "kidney bone disease" in the context of chronic kidney graft rejection and *in situ* micro-inflammation. This phenomenon could be reinforced by donor specific anti HLA antibodies.



P62-0060 RETURN IN DIALYSIS AFTER TRANSPLANTATION FAILURE: THE ETIOLOGIES AND CONDITIONS OF INITIAL MANAGEMENT

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Background and objectives: Return in dialysis after transplant failure, is an emerging problem in dialysis centers. The objective of this study is to determine the etiologies and conditions of initial management of these patients.

Material and Method: This is a retrospective study of patients who had a kidney transplant in the university hospital IBN ROCHD during the period between January 1993 and January 2012, and whose return to dialysis after transplant failure.

Results: Among the 170 patients transplanted, 14 patients restarted dialysis. In 7 cases, the failure was early, which occurred in less than a month of transplantation. In other cases the average duration of transplantation was 38.85 months. The mean duration of dialysis before transplantation was 3.77 years. The average age of patients at the time of return to dialysis was 42.64 years, the sex ratio (M/F) of 1.33. Acute rejection was the main cause of return to dialysis in our series (6/14), followed by vascular thrombosis in 4 cases.The mean glomerular filtration rate at dialysis initiation was 13.5 mL per minute. Urgent dialysis was needed for eight over 14 patients. The vascular access was a central venous catheter in 5 cases; the native AV fistula was reused in 8 cases.Immunosuppressive therapy was stopped during the first year of hemodialysis in 12 patients, six over 14 patients underwent transplantectomie.

Discussion: Various etiologies are responsible for graft failure with return in hemodialysis. There is an increasing number of patient returning on dialysis after transplantation failure. However, there is a lack of medical publication regarding dialysis after allograft failure. Despite the fact that patients returning on dialysis after transplantation failure have a regular nephrology follow up, un-planned dialysis initiation is frequent so that these patients are exposed to uremic complication. Earlier dialysis initiation is clearly mandatory for patients with allograft failure. Whether or not immunosuppressive therapy should be stopped early after dialysis start is still controversial. Maintenance of immunosuppressive therapy after return to dialysis could help maintain kidney function residual graft but is associated with an increased risk of infection.

Conclusion: There is relatively little data available regarding the initiation of dialysis in patients with failed kidney transplant. Further studies on this particular population are clearly needed.

P63-0067 INDUCTION THERAPY IN RENAL TRANSPLANTATION: ABOUT 52 CASES

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Introduction: Induction therapy reduces the incidence of acute rejection and delayed recovery of graft function after renal transplantation. Polyclonal and monoclonal antibodies antirecepteurs interleukin-2 are the most commonly used. We compared the impact of antithymocyte globulin (ATG) versus basiliximab (BSX) in functional prognosis of the graft.

Methodology: Retrospective review of case of kidney transplant patients who have received induction therapy by antithymocyte globulin (ATG) or basiliximab (BSX) from January 2000 to December 2010. With a one year hindsight.

Result: The analysis included 52 renal transplant patients, 48 transplants from living donors and 4 were cadaveric grafts, Thirty-nine (75%) patients received ATG and 13 (25%) received BSX. The average age was 37.48 years in the ATG group versus 23.92 years in the BSX group, with a predominance of Caucasians (98.07%) and male (67.30%) in both groups. Six patients (15.38%) had a delayed recovery of renal function and 9 (23.07%) patients developed acute rejection. Overall patient survival at one year was 100% in the BSX versus 92.30% in the ATG group, and graft survival was 100% (BSX) versus 87.18% 5 (ATG). The CMV infection rate was 12.82% in the ATG and 14.28% under BSX, and three (23.07%) patients had a BSX EBV infection. No group has developed lymphoproliferative disorders.

Conclusion: In our analysis, the use of ATG was associated with a higher rate of delayed graft function with a greater number of acute rejection, and the onset of CMV infection.

P64-0172 **IS IT REALLY NECESSARY TO CHANGE THE IMMUNOSUPPRESSIVE PROTOCOL IN LIVING UNRELATED RENAL TRANSPLANTATION!**

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Introduction: Despite the efforts for more deceased organ donations the living renal transplantation is still predominant transplant activity in the Balkan region. The reasons are different: political insecurity, social and economic crisis, poverty, no suitable legislation and lack of understanding and real support from the health authorities in some of the countries in the region. Facing the severe organ shortage, we started developing so called expanded criteria living donor program which includes use of elderly, marginal, unrelated (emotionally related) and ABO incompatible living donors. Here we presented our 10 years experience with living unrelated donors as an underestimated but valuable source of kidneys.

Methods: Twenty four living unrelated renal transplantations (LURT) are performed in our center in the last 10 years. The mean recipient's and donor's age was 41.7 and 47.2 years, respectively. As an unrelated donors were accepted predominantly spousal donors (n = 17) but also other members in the wide families (n = 7). All donors went through careful psychological investigations for confirmation of emotional relationship and elimination of any payment. The final decision was done after the signed consent in front of judge for both, recipient and the donor. After the standard surgical procedure the recipients and the donors were followed in the outpatient's basis. The usual quadruple sequential immunosuppressive protocols (poli or monoclonal antibodies as an induction and triple drugs maintenance therapy including MMF, CyA and PRED) were used in all recipients. Rejection episodes were treated usually with steroid pulse therapy for cellular rejections and plasmapheresis and rituximab for humoral rejection. The five years Kaplan Meier graft survival rate, HLA mismatch, rejection episodes, delayed graft function (DGF), actual serum creatinine and GFR-MDRD was analyzed. The results were compared with 30 living related renal transplants (LRT) performed in the same time with mean recipient's and donor's age of 35.9 and 58.5 years, respectively, treated by the same immunosuppressive protocol.

Results: The mean follow up for recipients were 81.4 and 79.6 months for LURT and LRT groups respectively which is not statistically significant. There was a significant difference regarding recipient's and donor's age (41.7 and 47.2 for LURT and 35.9 and 58.5 years for LRT transplants), HLA mismatch (5.07 and 2.9 for LURT and LRT groups) and rejections episodes (16% vs. 11% in LURT and LRT recipients). The 5 years Kaplan Meier survival rate was excellent in both groups (83 and 81%, respectively. There was no significant difference in actual serum creatinine (129.13 vs. 129.2 μmol/lit) and GFR-MDRD (56.6 and 58.5 ml/min) between the groups. The potentially negative effect of HLA mismatch in LURT recipients (5.07 vs. 2.9 in LRT) was probably neutralized by more younger donors in the LURT compared with LRT group (47.2 vs. 58.5 years).

Conclusion: The authors presented excellent long term graft and patient survival rate in both LURT and LRT recipients which is not statistically different. Despite the increased HLA mismatch in LURT versus. LRT group of patients (5.07 vs. 2.8, respectively) it was not necessary to change the usual immunosuppression. Therefore, the unrelated living renal transplants could ameliorate severe organ shortage in the region and should be recommended as a valuable source of organs in the countries with developed and underdeveloped deceased donor donation.

Ischemia-Reperfusion

P65-0041 KNOWLEDGE, OPINIONS AND ATTITUDES OF DOCTORS TOWARDS ORGAN DONATION

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Organ and human tissue donation in Morocco falls short of needs. This is due in part to the refusal of families but also to a lack of awareness. We conducted a survey of a representative sample of medical interns and residents to assess their knowledge and attitudes concerning organ donation and their training needs.

This is a cross-sectional study of medical interns and residents, an anonymous questionnary adapted to Moroccan context containing 29 questions (open and closed) assessing the knowledge, opinions, attitudes and needs about organ donation was given to doctors.

130 forms were distributed, 115 completed by 45 men and 70 women, 87 residents and 28 interns, 80% were aged from 25 to 34 years, 60% practice their profession of 1 to 5 years, 28% don't know that the organ removal from cadaver is made in Morocco. 74% know the structures authorized to organ removal. Only 6% are aware of the organs and tissues that can be taken. 76% know the definition of brain death. 88% were for the removal of organs and tissues from cadaver. 35% don't believe that brain death is the death of the individual. 10% don't know that Islam allows organ donation from a living donor and cadaveric. 98% believe that organ donation saves lives, 62% will give their organs and tissues after death. 25% refuse organ donation from a parent and 30% refuse it from their children after death. 40% think that the hospital coordinating must act after the expression by the family of the deceased's wishes. 91% would receive training in this area.

A medical, psychological and sociological study is needed to better understand the obstacles to organ donation and target the necessary training. The promotion of organ donation requires good training of medical and paramedical teams to sensitize the population.

P66-0146 RINSING LIVER BEFORE COOLING WITH SCOT15® SOLUTION DECREASES POST-TRANSPLANTATION CYTOLYSIS

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Introduction: The new preservation solution SCOT15 contains, as main characteristic, 15 g/l of polyethylene glycol (PEG) 20 kDa. In clinical liver transplantation (LT) with SCOT15 a decrease of gGT was observed post-operatively during several weeks, compare to the UW solution. However, following the reperfusion, the cytolysis was higher in the group SCOT15 than in the group UW. During the harvest procedure the preservation solution was perfused through aorta and through portal vein via the inferior mesenteric vein. From 2010 to nowadays, in order to improve the hepatic wash-out and dis-coloration, the portal perfusion included a rinse with 500 of NaCl 0.9% solution at room temperature and subsequently the cold SCOT15 solution. Aim of this study was to study post-transplantation biological data following such method of liver procurement.

Methodology: Retrospective study comparing a "no rinse'' group of LT (2009–10, 34 LT) and a "rinse'' group (2011–12, 38 LT). Brain dead donors were included, only. Split livers and multiorgan transplantations were excluded.

Results: The two groups were identical for the graft weight, the cold and warm ischemic times, the body mass index and the age of the donor. During the first 6 h following reperfusion, maximal release of ALAT was 1226 ± 186 IU/L in the non-rinse group and 664 ± 83 IU/L in the rinse group ($P< 0.01$) and for ASAT 2214 ± 347 IU/L and 1368 ± 255 IU/L, respectively ($P< 0.05$). Beyond 6 h, the curve of transaminases decreased and statistical differences disappeared. The release of CK tended to be lower in the rinse group than in the no-rinse group. The rates of factor V, level of total bilirubin, count of platelets were similar in both groups.

Conclusion: Rinsing the liver before cooling with SCOT15 decreases post-reperfusion cytolysis. This effect could be related to coagulation and PEG interactions.

P67-0074 ENDOPLASMIC RETICULUM STRESS IN ORGAN CONSERVATION: A NEW THERAPEUTIC TARGET?

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Introduction: Ischemia – reperfusion injury (IR) is known to play an important role in graft outcome. However, the underlying mechanisms are still poorly understood. Thus, we endeavored to determine the involvement in IRI of a recently described pathway, the unfolded protein response (UPR).

Methods: *In vitro* evaluation of cold storage (hypoxia, H) and reperfusion (reoxygenation, R) using human aortic endothelial cells in a protocol associating 0 h to 24 h of hypoxia in UW preservation solution at 4°C and 0 h to 6 h of reperfusion in culture medium at 37°C. The interconnection between cell survival and ER stress activation was studied by fluorometry, RT-qPCR, Western–Blot and EMSA.

Results: RT-qPCR analysis during hypoxia – reoxygenation (HR) showed that:

– IRE1α – XBP1 and PERK – ATF4 pathways were not activated during hypoxia but were highly activated during reoxygenation,

– ATF6 pathway presented a biphasic activation pattern during hypoxia, and was activated at reperfusion.

HR induced 41% ($P < 0.001$, NT *vs.* HR) of cell death compared to the non-treated group (NT), and the modulation of ER stress pathways during hypoxia showed that after 6 h of reperfusion:

– IRE1α – XBP1 inhibition by STF promoted survival (59%, $P < 0.001$, HR *vs.* STF),

– PERK – ATF4 activation by salubrinal showed a similar profile (60%, $P < 0.001$, HR *vs.* Salubrinal),

– ATF6 inhibition by AEBSF was also protective (71%, $P < 0.001$, HR *vs.* AEBSF).

Conclusion: We demonstrate ER stress involvement during IRI. The three branches of the UPR pathway show opposing roles regarding cell survival, suggesting a fine tuning of this process during organ preservation. UPR modulation appears to be a promising therapy against IRI in organ transplantation.

INFECTION

P68-0013 IMPACT OF IMMUNOSUPPRESSIVE TREATMENT ON DIGESTIVE TRACT COLONIZATION OF PYELONEPHRITIS STRAIN *E. COLI* 536

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Background: Uropathogenic *E. coli* (UPEC) strains cause urinary tract infections (UTIs) which are a major concern in kidney transplant recipients (KTRs), and are responsible for long term kidney graft function decline. *E. coli*'s establishment in the host digestive tract before it reaches the urinary tract and the impact of immunosuppressive (IS) drugs on intestinal colonization have not been studied.

Method: C3H mice were orally challenged with UPEC strain 536. Digestive tract colonization was assessed by plating of fecal samples. Mice were sacrificed 2 or 9 days post-infection, and cytokine expression was measured in the digestive tract. Anti-536 IgG were measured in blood. The experiment was repeated after 2 weeks of treatment with prednisolone, mycophenolate mofetil and tacrolimus or placebo.

Results: Pyelonephritis *E. coli* strain 536 efficiently (up to 10^8 CFU/g of feces) and stably (at least 2 weeks) colonized the mouse digestive tract after a single oral challenge. The incoming *E. coli* strain was specifically detected in the distal intestine through a local secretion of the inflammatory cytokines IL6 and TNF 48 h after bacterial oral challenge. Yet, no inflammatory infiltrate was observed in intestinal sections. Even though specific anti-536 IgG could be detected in blood 2 weeks after intestinal colonization, an intestinal inflammatory response was observed 48 h after a second oral challenge in pre-colonized mice. When mice were treated for 2 weeks with IS drugs before oral challenge, the host's intestinal inflammatory response was abrogated and *E. coli*'s digestive tract colonization increased 1000 fold.

Conclusion: Innate and adaptive immunity cooperate to control UPEC intestinal colonization. IS drugs might favor UTIs in kidney transplant recipients through enhanced digestive colonization. Trying to block digestive colonization by UPEC could be a new strategy to prevent UTIs in KTRs.

P69-0042 LATE OCCURRENCE OF CYTOMEGALOVIRUS POLYRADICULONEUROPATHY IN A RENAL TRANSPLANT RECIPIENT

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Introduction: The cytomegalovirus (CMV) polyradiculoneuropathy is a rare complication after kidney transplantation. Viral infection triggers a cross-immunization against antigens of the peripheral nervous system specially myelin. We report herein the case of a kidney transplanted patient who presented a CMV polyradiculoneuropathy.

Case: A 49-year-old man was transplanted from a related living donor in 1995.He received sequential immunosuppressive therapy: induction by anti-lymphocyte serum (SAL) followed by maintains therapy: azathioprine, cyclosporine and prednisone. At 28th day, he developed acute humoral rejection treated by bolus of methylprednisolone and SAL. Renal function was stable at 150 μmol/l. Fifteen years later; the patient was hospitalized for impairment of general condition with a motor deficit. Clinical examination showed: apyrexia, a Glasgow score of 15/15, standing and walking were impossible, tendon reflexes were abolished in the two lower limbs, cutaneous - plantar reflexes of the two lower limbs were in flexion with amyotrophy. Laboratory tests showed leukopenia of 610/mm^3, lymphopenia of 140/mm^3, CRP level of 65 mg/dl and liver function was normal. Serology of HSV, HIV, hepatitis B and C were negative .The electromyogram showed a severe sensori-motor, demyelinating polyneuropathy especially in the two legs. The CMV antigenemia was positive of 120 cells. Lumbar puncture showed: one white element/mm^3, albuminorrachie of 0.25 g/l and IgM against CMV. The diagnosis held was CMV demyelinating polyradiculoneuropathy. The patient was treated with ganciclovir for 3 weeks associated with immunoglobulins (Ig :1 g/kg/j for 4 days). The Ig course was repeated every 3 weeks during 24 weeks. The evolution was marked by a gradual recovery of motor function and walking. After 6 months, the patient died from pneumonia.

Conclusion: Polyradiculoneuropathy is a rare localization of CMV infection especially in renal transplant recipients. It must be suspected in patients with progressive, symmetric and distal polyneuropathy. The treatment is based on antiviral therapy and intravenous immunoglobulin.

P70-0045 REFRACTORY ANEMIA IN A RENAL TRANSPLANT RECIPIENT WITH PARVOB19 INFECTION

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Introduction: ParvoB19 infection is a known cause of severe anemia after organ transplantation. Currently there is no antiviral treatment available. The treatment involves reduction of immunosuppression and intravenous immunoglobulin. We report herein a patient with recurrent anemia immediately after renal transplantation.

Case: A 35-year old man, who was on hemodialysis for unknown nephropathy, received a living related kidney on June 2011. Postoperative course was uneventful. His immunosuppressive was of: induction with polyclonal antibodies, prednisone, MMF, and tacrolimus. His creatinine at discharge on day eight was of 90 μmol/l. During 3 months after transplantation the patient was dependant on blood transfusions (each 3 weeks) because of anemia at 3.5 to 5 g/dl. Clinical examination was poor and the patient was afebrile. Laboratory tests revealed: microcytic aregenerative anemia with no signs of hemolysis (LDH and haptoglobin levels were normal, direct coombs test was negative). Serum iron level is of 42 μmol/l and ferritin level is of 1102 μg/l. immunological tests (antinuclear antibodies,…) and CMV antigenemia were negative. Parvo B19 serology was positive for IgM in favor of a recent infection. DNA viral load for parvo B19, performed before treatment, was negative. Tacrolimus doses were reduced and intravenous immunoglobulin (IgIV) was prescribed at a dose of 0.4 g/kg/j for 7 days. The evolution was favorable with no recurrence of anemia.

One year later, renal function is stable at 88 μmol/l and hemoglobin is stable at 14.4 g/dl.

Conclusion: Parvo B19 infection should be suspected in kidney transplant recipients with refractory anemia requiring multiple blood transfusions and/or high doses of erythropoietin. Treatment relies on immunosuppressive reduction combined with intravenous immunoglobulin.

P71-0066 PREVALENCE AND RISK FACTORS OF INFECTIONS OF CYTOMEGALOVIRUS AFTER RENAL TRANSPLANT

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Introduction: Cytomegalovirus (CMV) is a common infectious complication after renal transplantation. If not treated, it could jeopardy the functional prognosis of the graft and the patient's vital prognosis. The identification of risk factors allows early diagnosis and effective prevention of CMV infection. The aim of our study was to determine the prevalence and risk factors associated with CMV after kidney transplantation.

Methodology: In this retrospective study we collected renal transplant patients between January 2000 and December 2010. All patients had received CMV serology before transplantation and were monitored through CMV DNA research using Polymerase Chain Reaction (PCR), either systematically or in presence of clinical or biological signs suggesting a CMV infection.

Result: We studied 52 cases of renal transplant patients, mean age of our patients was 49 years with 67.3% male. 55.82% had a serological profile D +/ R + and 21.07% profile D +/R-, 10.11% profile D-/R +. 13 of our patients requiring antibiotic prophylaxis against CMV based valganciclovir could receive it. 17 patients (corresponding to 32%) had a positive CMV PCR with 41.17% of CMV infection and 58.82% of CMV disease. The most frequent clinical manifestation was fever in 85.2% of cases followed by hematological (leucopenia) in 61.7% of cases. 82% of these attacks occurred between the second and fifth months. The cure was based on intravenous ganciclovir for a median duration of 2 weeks. Associated risk factors were the absence of antibiotic prophylaxy (89.2%), induction treatment with ATG (52.29%) and the presence of acute rejection (34.3%).

Conclusion: CMV infection is the most common infectious complication and the leading cause of mortality in renal transplantation. There is a high prevalence of CMV patients in our study, therefore the need to expand the use of preventive therapy in the population at risk.

P72-0095 PAUCI SYMPTOMATIC CRYPTOCOCCAL MENINGITIS AFTER RENAL TRANSPLANTATION: REPORT OF TWO CASES

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Introduction: Fungal infections of the central nervous system are rare and are more frequently encountered in immunocompromised patients. Cryptococcocal infection is the most common opportunistic fungal infection after Candida and Aspergillus in organ transplant recipients.

Case 1: A 35-year-old woman received a kidney graft in October 2008 from a living related donor. In April 2009, the patient presented with sudden bilateral ptosis. At admission, physical examination revealed bilateral ptosis, left facial paralysis, anisocoria, and positive Romberg sign. Resonance magnetic imaging (MRI) showed multiple lesions in hyper T2-weighted signals in the white sitting at the two frontal lobes and around the aqueduct of Sylvius. The results of lumbar puncture a white cell count of 150/mm3. The diagnosis of cryptococcosis was made on the basis of a positive India ink staining and a positive culture of cerebrospinal fluid (CSF). The patient was treated with intravenous amphotericin B with fluconazole. After 8 weeks of treatment with fluconazole. The outcome was favorable with complete regression of clinical signs and the CSF was also negative. However, the patient died 7 months later from pulmonary embolus.

Case 2: A 20-year-old man received living related kidney transplantation with a favorable outcome.

In January 2011 creatinine raised to 325 μmol/l. Graft biopsy revealed focal segmental glomerulosclerosis. Renal function continues to deteriorate, so corticosteroid has been tried at a dose of 1 mg/kg/j. five weeks later, the patient has been hospitalized for fever and dysarthria. Clinical examination was normal with no neurological signs. Cerebral CT scan and MRI were normal. Laboratory tests showed: CRP of 65 mg/l and a normal blood count. Lumbar puncture showed the presence of 60 elements and a positive india ink staining and a positive culture of CSF for Cryptococcus neoformans. Blood and urine culture was positive also for Cryptococcus. The patient was treated with amphotericin B and fluconazole then with fluconazole alone for 1 year. The outcome was favorable.

Conclusion: Opportunistic infections remain a major cause of mortality and morbidity especially among the immunocompromised patients. Clinical signs and neuroimaging findings are poorly sensitive. Early and appropriate diagnosis, rapid treatment initiation, and long maintenance therapy will improve prognosis and survival.

P73-0187 FIRST CASE OF THYROID ABSCESS WITH NOCARDIA NEOCALEDONIENSIS

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Nocardia is a gram positive purveyor of opportunistic infections in the form of scattered abscesses. We present the case of a patient with a thyroid localization to nocardia neocaledoniensis, species described in 2004.

The patient is 60 years old renal transplant in January 2011, treated by Tacrolimus, Mycophenolate-Mofétyl and corticosteroids. At 11 months of transplantation, the patient has sudden onset of swelling of the base of the neck associated with headache , right cervicobrachial radiation and fever. The neck ultrasonography reveals a right thyroid nodule 38 mm in diameter. Puncture is performed bringing a purulent fluid whose culture reveals a nocardia neocaledoniensis sensitive to Cotrimoxazole and Imipenem. A bi-antibiotic treatment is initiated. Immunosuppression is reduced with stop Mofétyl Mycophenolate and Tacrolimus reduced. A body scan reveals a nodule right upper lung lobe considered as a second location. We retain the diagnosis of disseminated nocardiosis with thyroid and pulmonary localization. The evolution is favorable with rapidly apyrexia.

A month later was a recurrence of thyroid abscess with tracheal compression and recurrent laryngeal paralysis by dysphonia. Total thyroidectomy is performed. The surgical specimen showed a multinodular goiter with inflammatory changes. Cotrimoxazole stop and a Imipenem monotherapy at 3 months of diagnosis. Chest CT scan performed at 6 months showed disappearance of pulmonary nodule. At 9 months of diagnosis the patient is now strictly asymptomatic.

In the literature there six publications for nocardiosis with thyroid disorders. One for a transplant patient (liver and kidney). All are multivisceral forms. In all cases the diagnosis made by the thyroid puncture and the cultivation of the aspirate (five Nocardia asteroids, one Nocardia farcinica). So this is the first case of nocardia neocaledoniensis thyroid abscess.

P74-0044 LATE OCCURRENCE OF PRIMARY TOXOPLASMOSIS IN A KIDNEY TRANSPLANT RECIPIENT: SHOULD IT BE TREATED?

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Introduction: Toxoplasmosis is a worldwide infectious disease caused by toxoplasma gondii. It is a benign disease in immunocompetent persons while it can be life threatening in immunosupressed ones.

Case: A 40-year old woman who was underwent deceased donor kidney transplantation on July 2002 presented at a routine follow up visit we discovered infracentrimetric and painful submandibular lymph nodes. Physical examination was poor. She was afebrile with no organomegaly. Laboratory tests revealed no abnormality on blood count, liver enzymes were normal and CMV pp65 antigenemia was negative. Toxoplasmosis serology was in favor of a primary infection with IgG titer of 41 UI/ml (> 6 UI/ml) and Ig M titer of 2.565 UI/ml (> 0.423 UI/ml). Eye fundus., abdominal echography and MRI angiography were normal. The patient wasn't treated but she had close monitoring of clinical condition, blood count, liver tests and toxoplasmosis serology. Twenty months later, the patient is still alive, lymphadenopathy disappeared and her serology became negative for Ig M.

Conclusion: To our knowledge this is the first case of primary toxoplasmosis occurring several years after renal transplantation and whose clinical presentation is made only of cervical lymphadenopathy. Toxoplasmosis in seronegative patients remains a life threatening complication. However, toxoplasmosis occurring several years after transplantation with no organ involvement may be not treated provided that patients are followed closely.

IMMUNOLOGY — BONE-MARROW

P75-0072 ALLOIMMUNE RESPONSE IN HUMANS AFTER EXPOSURE TO ALLOGENEIC APOPTOTIC BODIES: *IN VITRO* DATA

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Introduction: The apoptotic bodies emanate particularly from mononuclear cells in early stages of apoptosis have immunomodulatory properties and may modulate notably the alloimmune response. This immunomodulatory effect has been demonstrated in various murine models of transplantation but few studies have examined the effect of apoptotic cells (AC) on the human allogeneic response and the mechanisms involved are not yet fully demonstrated. Here we present the caracteristics of human AC and analyze their immunomodulatory properties *in vitro*.

Methods: The AC are obtained by UV-A treatment after 8-MOP sensitization of human PBMC (from healthy donors). AC were then incubated with PBMC from a second allogeneic donor (mixed lymphocyte reaction, MLR). Proliferative capacity, activation marker and of cytokine synthesis of responders PBMC were analyzed.

Results: Stimulation of allogeneic lymphocytes by AC causes a low proliferation (average 1.76%) compared to a conventional MLR (average 27%). In addition, T-cell activation markers like CD25 and CD69 are weakly expressed on the surface of $CD4^+$ and $CD8^+$ cells stimulated by AC. The synthesis of pro-inflammatory cytokines IL-6 and IFNγ obtained by standard MLR is absent upon stimulation with AC. Th1 orientation found in classical MLR is also reduced by stimulation via the AC (decreased expression of T-bet and lower TNFα and IL-2 synthesis). In a situation of indirect presentation, the culture of AC (donor A) with allogeneic APCs (donor B) shows a weak activation of the latter (decreased expression of HLA-DR and CD86). Stimulation by these APC leads to a very low proliferation of autologous lymphocytes (donor B) compared to stimulation of APC by PBMC (donor A) untreated.

Conclusion: Apoptotic cells induce a weak allogeneic response of lymphocytes *in vitro* whether in direct or indirect presentation supporting the idea of an immunomodulatory capacity in human allogeneic condition.

P76-0153 B-CELL REPOPULATION AFTER ANTITHYMOCYTE GLOBULIN COMPARED WITH ANTI-IL2 RECEPTOR INDUCTION : INCREASE IN TRANSITIONAL B CELLS CORRELATED WITH BAFF SERUM LEVEL

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Introduction: Anti-thymocyte globulin (ATG) is the preferred induction for kidney transplant recipients at high risk of humoral rejection. However, evolution of B cell phenotype has never been compared in patients treated with ATG or with anti-IL2 receptor.

Methodology: We included 29 kidney transplant recipients, 14 treated with rabbit ATG (rATG group) and 15 with basiliximab (IL2R group). We studied B cell phenotype on whole blood cells by flow cytometry according to the Bm classification, based on IgD/CD38 double staining performed on $CD19^+$ cells, at day 0, month 3 and month 12 post-transplantation. We also followed-up the count of $CD4^+$ T cells. At month 12, we tested three cytokines known to be involved in B cell homeostasis, BAFF, IL7 and IL21, by ELISA assay.

Results: All patients received their first transplantation. Recipients were older in the IL2R group: 57.9 ± 11.3 years vs. 48.0 ± 11.0 (P = 0.03). At day 0, B-cell phenotype was similar in the two groups. Naive cells (Bm1 + Bm2 cells) accounted for 69.5% of circulating B-cells. We observed 24.1 ± 12.7% of memory Bm5 cells and 5.2 ± 4.2% of transitional Bm2' cells. In both groups, Bm2 percentage transiently decreased at month 3 and returned to baseline at month 12. Patients of the IL2R group displayed a persistent drop in transitional cells at month 3 and month 12. In the rATG group, percentage of transitional cells decreased at month 3 but increased from month 3 to month 12 and was significantly higher at both times compared with the IL2R group (month 3:1.5 ± 2.0 vs. 0.3 ± 0.4%, P = 0.012; month 12: 3.9 ± 5.5 vs. 0.4 ± 1.2, P = 0.022). In the whole group (n = 29), we observed an opposite correlation between CD4+ cells count and percentage of transitional cells at month 12 post-transplant (r = −0.387, P = 0.038). BAFF serum level positively correlated with transitional cells percentage (r = 0.67, P< 0.0001), and negatively correlated with CD4+ cells count (r = −0.43, P = 0.02). We did not observe such correlation with IL21 or IL7 serum level.

Conclusion: B-cell repopulation after ATG induction is characterized by an increased proportion of transitional B cells, associated with an increase in BAFF serum concentration and a decrease in $CD4^+$ cells. The role of these transitional cells in this context has to be deciphered, particularly their potential regulatory function.

P77-0030 THERAPEUTIC EFFECT OF APOPTOTIC CELL INFUSION ON CHRONIC GRAFT-VERSUS-HOST DISEASE

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Introduction: Allogeneic hematopoietic cell transplantation (AHCT) is a curative therapy for hematological malignancies. However, such a therapeutic is limited by graft-versus-host disease (GvHD) occurrence in its acute and chronic forms that can rich 80% in some cohorts. Current treatments can only treat 40−50% of patients suffering from chronic GvHD (cGvHD). Since we demonstrated that apoptotic cell injection can favor tolerance and in particular in AHCT favor engraftment, prevent GvHD occurrence without affecting graft-versus-leukemia effect, we wondered whether apoptotic cell injection can treat cGvHD.

Methods: Using the cGvHD mouse model "parent into F1" (50.10e6 DBA1 spleen cells into non-irradiated B6D2F1 mice, iv), we have evaluated the therapeutic effect of a single injection of apoptotic cell (5.10e6 cells/mouse, iv) 4 weeks after cGvHD induction. Apoptotic cells originated either from the recipient or the donor spleen. We performed a clinical follow-up of the mice (looking for signs of cGvHD affecting weight, fur, activity and skin) and collected serum at day 0 and week 5 in order to quantify IgG, IgM, IgE as well as anti-ssDNA autoantibodies and IFN-γ using commercial ELISA kits.

Results: Our data demonstrated that either donor or recipient apoptotic cell injection decreased IgG and IgE levels without affecting IgM levels, compared to mice receiving only parent spleen cells. More striking, apoptotic cell injection (donor or recipient cells) strongly affected autoantibodies levels since mice presented low levels of autoantibodies after apoptotic cell injection compare to control animals.

Conclusion: Our data suggest that apoptotic cell single injection can be considered as an efficient treatment of cGvHD.

P78-0094 ELIMINATION OF HLA ANTIBODIES: IMMUNOADSORPTION COMPARED TO PLASMA EXCHANGE

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Antibody mediated rejection represents one of the main cause of graft loss. Several techniques to clean HLA antibodies are available such as plasma exchange methods (PE) and protein A based immunoadsorption (IA). The aim of our study was to compare the performances of PE and IA to lower HLA antibodies.

HLA immunized patients presenting an indication of antibodies lowering were allocated non randomly to IA or PE treatment (pretransplant desensitization program or biopsy proven antibody mediated rejection). Three consecutive daily plasma exchange sessions (45 ml/kg/session) were compared to one single 100 ml/kg IA session. Single antigen Luminex assays were performed on sera obtained at the beginning and at the end of treatment courses, allowing the determination of MFI for each HLA antibody.

Thirteen patients were allocated to PE treatment with a total of 15 PE courses, allowing the analysis of the evolution of 253 HLA antibodies as 9 sessions (2 patients) led to the analysis of the behavior of 157 specificities in the IA group. MFI were significantly reduced after both types of treatment: from 3518 to 1638 with IA treatment ($P < 0.001$) and 5475 to 2330 with PE series. Overall relative reduction was the same with both treatment (-65.4% and -65.0%, ns), but class I antibodies were more efficiently removed by one IA session compared to 3 PE sessions (-72% vs. -69%, $P = 0.01$). Strikingly, relative MFI reduction in class II antibodies was more pronounced after PE treatment (-32% vs. -50%, $P = 0.006$), since 20% of HLA antibodies in the IA group presented a higher MFI after IA session compared to only 10% in the PE group ($P = 0.02$).

This study is the first one that compares the efficiency of IA against PE to lower MFI levels of HLA antibodies, using a single antigen Luminex assay. The global efficacy was equal between one single IA session and 3 daily consecutive PE sessions, with a slight advantage of IA to reduce class I antibodies MFI. The lack of efficacy on class II antibodies was explained by a rise in several antibodies MFI. This effect is likely to be an artifact of Luminex assay, the C1q prozone effect which is suppressed by citrate used for anticoagulation of IA device.

One IA session seems to be globally as effective as 3 daily consecutive PE sessions. The lack of efficacy of IA on class II antibodies seems to be at least partly an artifact of measure.

P79-0102 GRAFT VERSUS HOST DISEASE AFTER INTESTINAL TRANSPLANTATION: A RARE BUT SEVERE COMPLICATION

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The massive influx of lymphocytes after small bowel transplantation (SBTx) expose the patient to graft-versus-host-disease (GVHD). It is for us a rare complication,but it seems more frequent recently. We describe 3 cases.

Patients: From 1994, 106 Tx were performed in 98 children, 59 isolated SBTx, 42 liver-SBTx, 2 multivisceral Tx. Three children (4, 12, 2 year-old, 2 boys) were transplanted for Hirschsprung disease (P1: multivisceral Tx), or congenital diarrhea (P2, P3, liver-SBTx). They developed acute cutaneous GVHD (P2, P3) and chronic GVHD (P1). There was no other organ involvement. P1 and 2 had undergone a splenectomy. All had been treated for humoral rejection with plasma exchange and IV immunoglobulins.

The 1st cutaneous signs appeared 1–4 months post-Tx. All patients had a viral replication (HHV6, EBV), and potentially responsible drugs (acyclovir for P1). The skin biopsy showed signs for either GVHD, or drug reaction or virus-induced lesions. A chimerism was found in P2's and P3's skin..The treatment was high dose steroids and increase in basal immunosuppression, ganciclovir against HHV6 (P1, P2), rituximab for EBV replication and the exclusion of acyclovir for P1. P1 died of acute infection one year post-Tx. P2 and P3 are well controlled 10 and 3 months post-Tx.

Discussion: GVHD after SBTx is rare. Other series report a higher risk in case of splenectomy. The immunological changes induced by the treatment of humoral rejection may also play a role. A viral infection or drugs may trigger the GVHD. The diagnosis between drug-induced or viral eruption, or GVHD is difficult: the three causes can be intricated, and the skin biopsy is poorly discriminating. The treatment is based on an urgent intensification of immunosuppression, and close follow-up, in order to treat prevent or treat early the complications.

P80-0043 ACUTE HUMORAL REJECTION (AHR) AFTER LIVING KIDNEY TRANSPLANTATION: ROLE OF LUMINEX TECHNIQUE

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Introduction: AHR has a low incidence after kidney transplantation; it is responsible of poor prognosis and graft loss in 27–40% of cases during the first year. The use of sensitive techniques for anti HLA antibodies detection may prevent a great number of these rejections.

Patients and methods: Four cases of HAR were collected between 1994 and 2011. The clinical characteristics of patients, the immunological features and the response to a protocol including prednisolone, intravenous immunoglobulin (2 g/kg/4 days), plasma exchange and 4 cures of anti CD20 (Rituximab) were studied. All patients received sequential immunosuppressive therapy: induction with polyclonal antibodies, prednisolone, anticalcineurin and MMF. The detection of HLA antibodies (ACC) in pre- transplant was made by LCT and was negative in all cases. Historic sera of patients with AHR were studied for ACC using Luminex and Labcreen PRA.

Results: The incidence of acute rejection was 8.36% (24/287) in our kidney transplanted patients, of whom 16.6% were humoral. The mean age of patients was 34 years. The donor was living related in 3 cases and unrelated in one case (husband). Three patients had 3 identities with the donor and one patient had no identity. Two patients were polytransfused and multiparous, one patient was poly transfused and nulliparous, and the last one was transfused only once time and nulliparous. The mean duration of treatment with ATG was 7 days. The resumption of diuresis was immediate in 3 cases. Cross match and ACC were positive in all cases after transplantation. ACC were poly- specific in 2 cases and directed against donor antigens in 2 cases. The study of historical serum by Labscreen found a positive cross match in 2 cases and poly-specific positive ACC in all cases. Graft biopsy showed signs of acute rejection in 3 cases and was not achieved in one case (thrombocytopenia). Looking for C4d on biopsies was not performed (unavailable). The evolution was favorable with normalization of renal function in 2 cases, a return to hemodialysis after one month in one case and after 3 years in the latter case.

Conclusion: Anti HLA antibodies has an important role in the occurrence of AHR. Detection of anti HLA antibodies should use sensitive technique especially in patients with high immunological risk (polytransfused, multiparity,…).

P81-0076 EVALUATION OF BONE MARROW TRANSPLANTATION TO PROMOTE RENAL TUBULAR REGENERATION AFTER EXPOSURE TO LETHAL DOSES OF CISPLATIN IN MICE

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Introduction: Cisplatin-induced acute tubular necrosis (ATN) is often irreversible, with no effective treatment. Kidney transplantation is excluded in a context of active cancer. Transplantation of cells derived from bone marrow (BMC) has shown encouraging results in animals in preventive studies, but has never been tested in the phase state of the lesions encountered in clinical situations.

Methods: ATN was induced by intraperitoneal injection of cisplatin (17.5 mg/kg) in C57BL/6J female mice. A day 3, the state phase of tubular damage, intravenous injection of 1 million syngeneic BMC and not exposed to cisplatin was performed and compared to an injection of normal saline. The transplanted cells were able to be followed with a marker either constitutive (Green Fluorescent Protein) or inserted ex vivo (Carboxyfluorescein succinimidyl ester). The endpoint was tough: survival at day 10. After sacrifice of the survivors, cellular integration in the kidney and in the bone marrow was evaluated by flow cytometry. Four independent experiments were performed.

Results: The model induces severe acute renal failure (creatinine at day 3: 320 vs. 12.6 μmol/l in cisplatin and control groups, respectively). Cell transplantation has not increased or prolonged survival, compared with the group receiving normal saline (logrank test, P = 0.56). BMCs effectively integrated the bone marrow of transplanted animals (0.035%, interquartile range: 0.0175), but were not found in the kidney.

Conclusion: Bone marrow transplantation in the irreversible phase state of cisplatin ATN in mice does not improve survival.

P82-0083 RENAL EXPRESSION OF CD99 IN ACUTE RENAL ALLOGRAFT REJECTION

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Introduction: The pathophysiology of acute cellular rejection (ACR) in renal transplantation remains incompletely understood. CD99 is a ubiquitous transmembrane molecule involved in cell migration, adhesion to vascular endothelium and expression of MHC class I. Thus, we wanted to analyze the renal expression of CD99 in ACRs.

Materials and Methods: We selected biopsy samples from kidney recipients who presented a ACR (ACR+) and controls without ACR (ACR-). CD99 expression was studied by immunostaining.

Results: 15 ACR+ and 4 ACR- were analyzed. CD99 positive staining was found in 4/4 ARC-and 12/15 ACR + ($pX2$ = ns). The location of CD99 depending on the severity of the RAC is represented in the following table.

		nbre of patients CD99 +			
Grade Banff	nbre of patients	Glomeruli	Interstium	Tubes	Peri-tubular capillaries
IA	7	2	2	0[a]	1[b]
IB	7	1	5	6[a]	6[b]
IIB	1	1	0	0	0

[a]: $pX^2 = 0,05$l; [b] : $pX^2 = 0,03$

Discussion: CD99 is not a specific marker of rejection. However in the ACR, CD99 seems even more frequently expressed in the tubes and peritubular capillaries that rejection is more severe. In this work, the cells expressing CD99 are not clearly identified. It could be immunocompetent cells (leukocytes, dendritic cells ...) involved in the severity of rejection. Indeed, given the properties of CD99, particularly in terms of adhesion and cell migration, expression could facilitate the transcellular migration.

P83-0006 IS THERE A LINK BETWEEN EVEROLIMUS AND AZOOSPERMIA?

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Introduction: Adverse effects of mTOR inhibitors on spermatogenesis are poorly evaluated but hypogonadism is described under sirolimus. We report the case of a renal transplant 30 years old patient in whom azoospermia was discovered while he was being treated by everolimus.

The clinical case Mr X has received a kidney transplant for which he received a treatment with cyclosporine, mycophenolate and steroids. The initial evolution was favorable. The initial evolution of the graft was favorable. Cyclosporine was replaced by everolimus 3 months later within a protocol. The tolerance was good and the renal function continued to improve under everolimus. Mr X and his wife have done an infertility check up eight months after the start of treatment and it revealed that Mr X with had an extreme oligospermia with 0.5x10.6 spermatozoa per ml of ejaculate, hypospermia (1.1 ml) and the spermocytogramme was impossible. Unfortunately, we don't have previous semen analysis. Given hypogonadism is described under sirolimus, the hypothesis of a causal link between disorders of spermatogenesis and everolimus was raised. A year after the transplant, the cyclosporine was resumed with, in parallel, a progressive stopping of everolimus, without further therapy modification. A semen analysis performed 3 months later the stopping of everolimus, revealed moderate hypospermia (1.2 ml) and a subnormal spermocytogramme (130x10.6 sperm per ml of ejaculate and 43% atypical spermatozoa). A month later Mrs. X was pregnant.

Conclusion: This isolated case does not suggest a direct link between everolimus and disorders of spermatogenesis. But it raises the problem of the lack of available data and studies on male fertility, while 40% of men grafted are less than 50 years and mTOR inhibitors have a promising future in kidney Transplantation.

Liver

P84-0122 HIGH MOBILITY GROUP BOX RELEASE AND PPAR-GAMMA IN STEATOTIC LIVER SUBJECTED TO COLD ISCHEMIA REPERFUSION INJURY

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Antecedents: High mobility group box 1 protein (HMGB1), is an important inflammatory mediator involved in the pathogenesis of ischemia-reperfusion injury (IRI). Its role in fatty liver preservation was poorly understood. In this commmuncation, we evaluated the relationship of HMGB−1 with other potential factors markers implicated in the vulnerability of steatotic grafts against IRI, such as hemeoxygenase-1 and PPAR gamma, respectively.

Experimental: Steatotic and non-steatotic livers preserved in UW and IGL1 (24 h; 4C), respectively and the reperfused (2 h; 37C). HMGB1, PPARgamma and HO-1 were determined by western blot and correlated with oxidative stress, mitochondrial damage and apoptosis degree. Liver injury (AST/ALT), function (bile output, vascular resistance) and proteolysis were also evaluated.

Results: Major HMGB-1 levels were found in steatotic livers at 2 h of reperfusion when compared to non steatotic ones. In any case, the liver HMGB1 protein levels were significantly lower in grafts preserved in IGL-1 solution than UW one ($P < 0.05$). This was concomitant with HO-1 increases which were more relevant for the steatotic grafts than non steatotic ones. However, this is not true for PPAR gamma expression which only was augmented in fatty livers. All changes in protein levels were consistent with a liver injury diminution (AST/ALT), proteolysis, as well as an ameliorated function of the grafts preserved in IGL-1 solution. Also, the oxidative (MDA) stress and mitochondrial damage (GLDH) and apoptosis were efficiently prevented by the IGL- 1 use.

Conclusions: IGL-1 solution prevented efficiently fatty liver proteolysis, as well as HMGB1 increases against IRI. The IGL-1 benefits mediated by HO-1 are due to PPAR gamma activation which explains the beneficial effects of IGL-1 on fatty liver preservation.

P85-0028 PROSTATE CANCER AFTER LIVER TRANSPLANTATION: DO NOT FORGET

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Introduction: Improvements in immunosuppression and anti-infection drugs in liver transplantation (LT) have led to a significant survival increase for patients and grafts. Prostate cancer (Pca), being the most common tumor in men and given the increasing number of older male recipients, should show an increasing incidence in liver transplant recipients (LTR). The aim of this study is to analyze retrospectively our LTR cohort and extract patients with prostate cancer.

Material and Method: Between 1995 and 2012, we found 11 LTR with a Pca. Age at diagnosis was 62 ± 5 (55−71) years old and the interval from LT to diagnosis was 68 ± 38 (9−138) months. PSA level was 13.5 ± 15.7 (0.5−53) ng/ml. Clinical stage was T1, T2 and T3 in respectively 3, 7 and 1 patients. Diagnosis was suspected during screening, because of prostatitis or bone pain in respectively 9, 1 and 1 patients.

Results: Eight patients with a localized disease underwent radical prostatectomy. Histological findings were 4 pT2 and 4 pT3 tumors, without positive surgical margins. Gleason score (GS) was 3 + 3 in 7 cases and 5 + 2 in 1 case. One patient with positive pelvic lymph nodes was placed under hormonotherapy. Another had a biochemical recurrence at 10 months and was treated with salvage radiotherapy. With a follow-up of 33 ± 17 (10−58) months, none of the other patients had evidence of recurrence.

One patient with a clinical T1 Pca, GS 3 + 2, was treated with HIFU without evidence of clinical or biochemical recurrence at 21 months. The patient with prostatitis had a T2 Pca, GS 4 + 3 and was treated with external radiotherapy without recurrence at 61 months. The last patient with bone pain had a metastatic Pca, GS 5 + 4, and died after 5 months.

Conclusions: Prevalence of Pca in LTR remains controversial, even though a significant increase can be expected in the coming decades. It is therefore recommended to screen male LTR after 50 years of age because therapeutic outcomes are much better for Pca diagnosed and treated early. Radical prostatectomy or external radiotherapy are usually considered for curative treatment. HIFU should be an alternative curative treatment for small localized Pca. In cases of metastatic disease, hormonotherapy is recommended, but the prognosis is usually poor.

Heart – Heart and Lung

P86-0038 ESTIMATION OF RENAL FUNCTION AFTER THORACIC TRANSPLANTATION: ACCURACY OF ESTIMATED GLOMERULAR FILTRATION RATE AND OUTCOME AFTER RENAL WORKUP

Pierre Housset, Romain Guillemain, Mélanie Roland, Catherine Amrein, Alexandre Karras, Véronique Boussaud, Dominique Nochy, Véronica Pezzela, Eric Thervet Hopital Européen Georges Pompidou, Paris, France

Introduction: The prevalence of renal lesions after thoracic transplantation (ThT) is increasing due to the aging of this population and increased patient and graft survival. Accurate measurement of renal function in this population is underperformed. The aims of our study were to describe the value of different formulas to estimate the glomerular filtration rate (eGFR, ml/min/1.73m2) and to specify the evolution of renal failure before and after renal biopsy (RB).

Materials and Methods: We conducted a retrospective monocentric study in 36 adult TrT requiring RB. To analyze the performance of eGFR, we used a Bland Altman analysis. To compare the changes in the eGFR by CKD-EPI (difference of slopes before and after RB), we analyzed the slopes by a linear mixed model.

Results: In the absence of measured GFR, CKD-EPI formula was chosen as a reference. At the time of ThT, there is a significant eGFR overestimation by MDRD and Cockcroft and Gault (CG) (+17.5 and +12.8). Analysing only patients with eGFR< 100, we noted a underestimation by MDRD and overestimation by CG (bias -4.7 and +2). The MDRD was more accurate (SD 3.8 vs. 7.92). At the time of the RB, eGFR was lower with was underestimated by MDRD (bias -1.9) and overestimated by CG (through 1.9). MDRD formula was more accurate (2.4 vs. DS. 5.2).

Nephrologist referal (defined as the date of the PBR) modified the evolution of renal function. There is a decline in eGFR before RB (81.29 vs. 32.17) and a stabilization afterward (33.51 vs. 44.9 at the last follow-up). The equation of the regression line of eGFR before RB was -0.11x4.90Time, this value was -0.02x3.59Time after RB. The origin of the line is statistically different and the slope numerically different (slower decline in GFR after RB).

Conclusion: In a population of ThT, it is necessary to validate the existing eGFR formulas or to create new formulas. MDRD formula is more accurate than CG. The change in GFR after ThT is marked by a worsening of the function that lead to the realization of a RB. Nephrological support allows stabilization of the degradation of renal function.

P87-0174 SUCCESSFUL COMBINED HEART AND KIDNEY TRANSPLANTATION IN A HYPERSENSITIZED CHILD

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The current challenge of organ transplantation is the treatment of humoral chronic rejection and transplantation in hyper-immunized patients. This major problem in adults, is becoming a reality in pediatrics.

We present the case of a 10 year old child who received a combined heart-kidney transplantation in a major immunization. She received a first heart transplant at the age of 14 months (restrictive cardiomyopathy). It was complicated by humoral chronic rejection with specific antibodies against the donor (DSA) anti-class I and II to 56%. Due to the progressive deterioration of cardiac and renal function, the decision was made to propose combined heart-kidney transplantation in emergency.

Because of broad immunization, transplantation was prepared by plasma exchange (PE) and Rituximab® infusion. Therapy consisted of a quadruple sequential immunosuppression with SAL and IgIV. The virtual and Luminex ® cross-match were negative. The evolution was marked by an absence of acute rejection (myocardial (M1, M3, M6, M12) and kidney (M3, M12) biopsies). CMV reactivation was treated with oral anti-viral treatment. Transient BK virus PCR (blood and urine), was controlled with decreased immunosuppression at M3. Overall, immunological lymphocyte reconstitution was good and there is no neo-antibodies to date. There is a recurrence of the previous graft antibody class I and II (3% and 13% Luminex ® anti-class I and II respectively). Lymphocytotoxicity was negative.

School attendance and physical activity was normal 18 months after grafting.

To this day, renal transplantion in hyperimmunized recipients are based on living donor protocols. The rationale is based on the ability to program the protocol de-immunization and wait negativity crossmatch before performing the transplant.

In this case, this program could not be performed because of heart failure, and the inability to use a living donor transplant. Using the list of ''super-urgence'' transplant allowed us have the right therapeutic window after DSA negativity.

We report our experience of the first french combined heart-kidney transplantation in a hyperimmunized child. Usual therapeutic tools, combined with up-to date de-immunization protocols, and proper use of priority rules can give hyperimmunized children a new hope of even in the absence of living donor.

P88-0100 POPULATION PHARMACOKINETICS AND BAYESIAN ESTIMATION OF MYCOPHENOLIC ACID EXPOSURE IN HEART TRANSPLANT RECIPIENTS: COMPARISON OF TWO APPROACHES

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Introduction: Area under the curve (AUC) of mycophenolic acid (MPA) has been reported as an important marker of graft outcome. The aim of our study was to develop: (i) population pharmacokinetic (POPPK) models in adult heart transplant patients using 2 different approaches (parametric P, and non parametric NP); and (ii) two independent Bayesian estimators (BE) enabling the estimation of AUC using a limited sampling strategy.

Methods: Fifty six MPA pharmacokinetics (PK) profiles were collected from 39 adult heart transplant patients given mycophenolate mofetil. Population PK analysis was performed using both the parametric iterative two-stage Bayesian and the nonparametric adaptive grid (in Pmetrics R package) approaches. The PK profiles were described by a one-compartment model with first-order elimination and two gamma laws to describe the absorption phase.

Results: Data were divided into a development dataset (n = 37) and a validation dataset (n = 19). For each approach, a POPPK model was developed that accurately fitted the observed PK profiles. In the validation group, the BE developed using each model yielded good AUC estimation performance (bias of -1.26 ± 19.33% (P) and -1.12 ± 19.34% (NP)) on the basis of a 20, 60, 180 and 360 min sampling schedule. Accordingly, dose adjustment (for a 45 mg.h/l target AUC) based on BE was similar to that proposed on the basis of the reference AUC (trapezoidal AUC using all the available concentrations) in 79% (P) and 84% (NP) of the patients.

Conclusion: The PK profiles of MPA in heart transplant patients are more complex than those observed in kidney graft recipients. Bayesian estimators allowing the determination of MPA AUC using a limited number of blood samples have been developed using 2 totally independent population modelling approaches. They are now available on our ISBA website (https://pharmaco.chu-limoges.fr) for routine dose adjustment.

P89-0189 SUCCESSFUL TRACHEAL REPLACEMENT IN HUMANS USING AUTOLOGOUS TISSUES – AN 8 YEAR EXPERIENCE

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Background: Fifty years of surgical research using synthetic materials and heterologous tissues, failed to find a good, durable replacement for the trachea. We investigated autologous tracheal substitution (ATS) without synthetic material or immunosuppression.

Method: For ATS, we used a single stage operation to construct a tube from a forearm free fascio-cutaneous flap vascularised by radial vessels which will be re-anastomosed to internal mammary vessels and that were reinforced by rib cartilages interposed transversally in the subcutaneous tissue (Fig 1 and 2). Tracheal resections, 7–12 centimeter (mean 11) long, were done to treat ischemic destruction (3), adenoid cystic carcinoma (7), squamous cell carcinoma (1) and thyroid carcinoma (1). Transitory tracheotomy was preventively associated due to absence of muco-ciliary clearance.

Results: Since 2004, 12 patients have had ATS with additional resections in four cases (carinal resections alone (1) associated with lobectomy (1), pharyngolaryngectomy (2)). All patients were extubated on the first post-operative days; 10 patients are alive at 2–94 months (mean = 36) post-operatively , with no respiratory distress. The 2 patients with ATS and carinal resections died due to pulmonary infection. No tracheal stents have been needed. No airway collapse has been detectable, either by endoscopy, dynamic CT scan or spirometry. Three patients still have a tracheotomy because performed too low at the level of the proximal anastomosis.

Conclusion: ATS is good, durable tracheal substitution that resists respiratory pressure variations without any stent.

P90-0037 ESTIMATION OF RENAL FUNCTION AFTER THORACIC TRANSPLANTATION: ACCURACY OF ESTIMATED GLOMERULAR FILTRATION RATE AND OUTCOME AFTER RENAL WORKUP

Pierre Housset[1], Romain Guillemain[1], Mélanie Roland[1], Catherine Amrein[1], Alexandre Karras[1], Véronique Boussaud[1], Dominique Nochy[1], Véronica Pezzela[1], Corinne Alberti[2], Eric Thervet[1] [1]Hopital Européen Georges Pompidou, Paris, France; [2]Hopital Robert Debré, Paris, France

Introduction: The prevalence of renal lesions after thoracic transplantation (ThT) is increasing due to the aging of this population and increased patient and graft survival. Accurate measurement of renal function in this population is underperformed. The aims of our study were to describe the value of different formulas to estimate the glomerular filtration rate (eGFR, ml/min/1.73m2) and to specify the evolution of renal failure before and after renal biopsy (RB).

Materials and Methods: We conducted a retrospective monocentric study in 36 adult TrT requiring RB. To analyze the performance of eGFR, we used a Bland Altman analysis. To compare the changes in the eGFR by CKD-EPI (difference of slopes before and after RB), we analyzed the slopes by a linear mixed model.

Results: In the absence of measured GFR, CKD-EPI formula was chosen as a reference. At the time of ThT, there is a significant eGFR overestimation by MDRD and Cockcroft and Gault (CG) (+17.5 and +12.8). Analysing only patients with eGFR< 100, we noted a underestimation by MDRD and overestimation by CG (bias -4.7 and +2). The MDRD was more accurate (SD 3.8 vs. 7.92). At the time of the RB, eGFR was lower with was underestimated by MDRD (bias -1.9) and overestimated by CG (through 1.9). MDRD formula was more accurate (2.4 vs. DS. 5.2).

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Conclusion: In a population of ThT, it is necessary to validate the existing eGFR formulas or to create new formulas. MDRD formula is more accurate than CG. The change in GFR after ThT is marked by a worsening of the function that lead to the realization of a RB. Nephrological support allows stabilization of the degradation of renal function.

P91-0179 PRELIMINARY PHARMACOKINETIC EVALUATION OF EVEROLIMUS QD IN THORACIC TRANSPLANT PATIENTS

Vianney Poinsignon[1], Christian Woloch[1], Catherine Amrein[2], Véronique Boussaud[2], Eliane Billaud[1], Romain Guillemain[2] [1]Hôpitaux Universitaires Paris Ouest, Pharmacologie, Paris, France; [2]Hôpitaux Universitaires Paris Ouest, Transplantation thoracique, Paris, France

Introduction: Several elements are in favour of the use of everolimus (ERL) once daily (QD): a long half-life (30h) as tacrolimus ; the availability of Afinitor® (a once daily drug developed in oncology) with a similar formulation as Certican® ; Advagraf® with tacrolimus even though it is a sustained release specific formulation.

In transplantation, the switch from Prograf® to Advagraf® is often designed to improve compliance and simplify the treatment of difficult patients, especially the youngest. It was therefore proposed to test the use of Certican® QD in thoracic transplanted patients during their switch to Advagraf® for harmonization, simplification of the treatment and compliance improvement.

Methods: Over the 2008−2012 period, the pharmacokinetic of a Certican® QD regimen in our centre has been documented in 9 patients (4 heart transplants, 5 lung including 3 cystic fibrosis) : 4 were obtained through a switch QD, 2 when prescribing initial QD et 3 already with a Certican® QD follow-up.

Pharmacokinetics (PK) [0, 0.5, 1, 1.5, 2, 3, 4, 8, 12, 24h] prospectively collected are corresponding to the 4 switches and 2 ERL QD straightaway. Therapeutic Drug Monitoring (TDM) results were available in 5 patients receiving Certican® QD including 2 from the PK study. Whole blood ERL samples were assayed by LCMSMS.

Results: TDM data are in favour of maintained trough concentration (C0) (5 to 10 ng/mL with a usual variability of 25%). The exposure, assessed by the PK data, is adequate and consistent, respectively 331 ± 70 et 155 ± 80 ng.h/mL for a 3.1 ± 1.1 dose and 1.7 ± 0.9 mg/d with the QD (24h) versus BID (12h) schedule. The peak concentration is significantly higher with QD 41.8 vs 34.6 ng/mL ($p < 0.01$). Three patients with a TDM follow-up treated with azole antifungals while ERL QD initiating did not present any particular issues.

Conclusion: The feasibility of administering Certican® QD is documented by adequate exposure levels with doses comparable to the standard BID schedule resulting of individual adaptations, susceptible to maintain efficacy performance. Despite higher peak concentrations further investigations are warranted to confirm the adequate tolerance assessed.

OTHER

P92-0070 USING HUMAN AMNIOTIC MEMBRANE (HAM) STERILIZED BY GAMMA IRRADIATION FOR THE TREATMENT OF BURN WOUNDS, CHRONIC LOSSES OF SUBSTANCES (E.G. LEG ULCERS, ...)

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Objectives: The experimental use of cell therapy (HAM-based) has been the subject of many research in more than 30 R&D labs in the world (Phillips, 1981).

The interest of HAM is due to its organic temporary surface coverage potential.

The procedures for the preservation and sterilization of the HAM are respectively freezing and gamma irradiation.

- The freeze ensures perfect preservation of the morphological structure of stored tissue.
- Irradiation is the universally accepted procedure for sterilization of medical and biomaterials.

From the practical point of view, irradiated HAM is used as biological dressing for chronicsubstance loss, burns, bedsores, as well as amputated end-members.

The advantages of the use of HAM are numerous

- Normal physiological process: avoid water loss and allow heat exchange
- The healing effect due to the production of growth factors and to the activation of cell migration,
- Anti-inflammatory effect,
- Antimicrobial effect,
- Economic savings: available, easy to implement, facilitate and accelerate healing (Reduced time spent in hospital)
- Cosmetic effect: contraction may reduce scars sequelae and pigmentation of the skin (more or less uniform).

The clinical application, in our study, was mainly focused on intermediate burn wounds and leg ulcers.

Clinical methodology:

- Antiseptic Cleaning & dressing the wound prior
- Rehydration of the HAM with a sterile physiological water,
- Application of sterile dressing to protect and strengthen the membrane, then apply contact upon the wound for comfort and efficiency of the protocol, bandages can be added, depending on the patient's intrinsic position.
- The change of the membrane is conditioned by the presence of an infection, maceration, debris (Blast, ballistic impact,) or pus
- Application timing renewable every 12 h
- Wound observation records (exudate, early epithelialization contours, cells granulation, pain, ..)

Conclusion: Based on our observations, and according to this study, we observed a significant improvement in the healing process as well as attenuation of inflammatory process, thus the use of the HAM should be gradually generalized to any type of wound, of course, according to a rigorous and codified clinical protocol, in order to optimize the health-giving management and its corollary, the healing of the patient and, if possible, without disabling sequelae.

P93-0136 EPITHELIAL-TO-MESENCHYMAL TRANSITION AND TACROLIMUS TOXICITY IN RENAL TRANSPLANT RECIPIENT

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Introduction: Anticalcineurins long-term use is associated with interstitial fibrosis, partly responsible for chronic graft dysfunction in kidney transplantation. Studies in patients treated with cyclosporine show that fibrosis is preceded by a process of epithelial-to-mesenchymal transition (EMT) whose extent is predictive of the level of renal function in the medium term. The involvement of Tacrolimus in induction of EMT has not yet been evaluated.

Patients and methods: We retrospectively studied 140 renal transplant patients treated with Tacrolimus and analyzed two EMT markers (de novo expression of vimentin and translocation of β-catenin by tubular cells) in protocol biopsies performed 3 months after transplantation. To determine influence of Tacrolimus metabolism on EMT process, the Single Nucleotide Polymorphism (SNP) of CYP3A5 and ABCB1 genes, coding for proteins involved in the transport and metabolism of Tacrolimus, were determined in donors and recipients. The minimum follow-up of patients was 2 years.

Results: This study confirms that recipients carrying at least one CYP3A5 * 1 functional allele require higher doses of Tacrolimus (1.13 ± 0.03 mg/kg/day vs. 0.78 ± 0.03, $p < 0.001$ at 3 months) and have lower blood concentrations (7.1 ± 1.9 vs 9.22 ± 2.7, $p < 0.001$ at 3 months), regardless the time of transplantation. However, we haven't found a link between exposure to Tacrolimus and intensity of EMT markers. Contrary to what is reported with cyclosporine, we did not reveal any correlation between EMT score and graft function. In contrast, the presence of the CYP3A5 * 1 in the donor is associated with a lower score TEM (0.18 ± 0.3 vs 0.42 ± 0.49, $p < 0.01$). Finally, the 3435T mutation affecting donor ABCB1 significantly influences interstitial fibrosis score "ci" (0.54 ± 0.56 vs 0.91 ± 0.65, $p < 0.01$), arteriolar hyalinosis (0.44 ± 0, 66 vs 0.83 ± 0.95, $p < 0.01$) and EMT (1.27 ± 0.74 vs 1.7 ± 0.73, $p < 0.01$).

Conclusion: These data suggest that Tacrolimus nephrotoxicity may depend in part on the metabolism of this molecule in the transplanted kidney, and would be associated with *CYP3A5* and *ABCB1* polymorphisms in donor's genome.

P94-0190 EFFECT OF ERYTHROPOIETIN INJECTION AND USE OF BLOOD TRANSFUSION IN EARLY KINDNEY POST-TRANPLANTATION

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Anemia in early post transplantation is explained by several causes like blood samples, surgery complications, sepsis, renal failure, immunosuppression, etc.. Anemia consequencies are not unsignificative because of the high prevalence and ever higher severity of comorbity (older patients, coronaropathy). We shall optimize the way tu support anemia in early post transplantation.

The aim of this observational study is to analyze the effect of erythropoietin injection and the use of blood transfusion in early kindney post-tranplantation.

Equipement: 208 patients who get a kidney transplantation were included in the study between 2005 and 2009. Darbepoetin alfa doses were regularly notified during the 6 first months following the transplantation. 2 groups have been distinguished, those with 100μg a week doses received ($n = 143$) and those with lower 40μg a week doses received ($n = 64$).

Results: On M1, patients who received a first dose of EPO 40μg were significantly more transfused that in the group having received a first dose of 100μg of EPO. (89.1% vs. 59.4, $p < 0.001$). The average number of transfusion was significantly more important in the group 40μg compared to the 100μg group (2 vs. 1, $p < 0.001$) , and the total number of transfused globular base was significantly more important in the group 40μg (4 vs. 3, $p < 0.001$). No significant difference was found between the 2 groups on the impact of the delayed recovery of renal function, of the occurrence of acute kidney rejection, of thromboembolic or polyglobulic event. The period of stabilization of hemoglobin was not faster in the first dose with 100μg group compared to the group with 40μg. Finally, the cost of use of high dose of EPO is not compensated by the economic benefit brought by the transfusion of globular base reduction (estimated cost of anemia in 6 months post transplant: 1277.6 euros in the 40μg group and 1622.3 euros in the 100μg group, $p < 0.027$).

Conclusion: The use of a dose of 100μg EPO per week significantly reduced the use of globular transfusion without impact on the incidence of delayed recovery of renal function, or acute rejection or polyglobulic and thromboembolic event. We should analyse prospectively the impact on anti HLA immunization and lead a pharmaco-economic study more complete.

P95-0031 THE TRANSPOSITION OF THE EUROPEAN UNION DIRECTIVE ON STANDARDS OF QUALITY AND SAFETY OF HUMAN ORGANS INTENDED FOR TRANSPLANTATION: THE EXAMPLE OF BELGIUM

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Self-sufficiency, standards of quality and safety, biovigilance and traceability, fight against organ trafficking and transplant tourism, etc. In recent years, the involvement of international organizations in organ procurement and transplantation has increased. Various actions have therefore been undertaken, based on the organizations' territorial scope and range of competences. Compared to the World Health Organization and the Council of Europe, the European Union (EU) has the distinctive feature of being able to act autonomously with regard to this subject matter, thanks to the powers delegated by its Member States. Thus, on 7 July 2010, the EU adopted a directive on standards of quality and safety of human organs intended for transplantation. As with every directive, the national authorities are free to choose the forms and means of action, but the defined outcome is binding within a given time frame – in the present case, the transposition of the European provisions into national legislation was slated for 27 August 2012.

The aim of the present paper is to analyze the approach adopted by one of the twenty-seven EU member states for complying with this obligation. The recent modifications made to the legal framework governing organ donation activities in Belgium are thus studied. Their contents are examined and a critical evaluation is also provided, based on a comparative and international approach. In this respect, it is interesting to note that, thanks to its long-standing experience in transplantation and its involvement with the organ allocation organization Eurotransplant, Belgium had in fact already been applying many European requirements. Nonetheless, the formalization effort induced by the directive created an opportunity to introduce certain changes and new elements. Their efficiency will have to be tested over time.

P96-0051 WATCHING, LISTENING, TRANSLATING: THE ANTHROPOLOGIST'S POSITION IN A RENAL TRANSPLANT UNIT

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Introduction: Medical anthropology focuses on the experience of illness for individuals and demonstrates that health practices are related to representations which are analysed by the researcher. If anthropologists are practicing participant observation, their integration in a team care is rare and questions their role beyond research.

Methodology: The objectives of this study were to determine the role of an anthropologist in a renal transplant unit after four years of practice by going back to the list of interventions with patients and to their conclusions. From 2008 to 2012, 84 qualitative interviews were conducted with patients. The analysis of these interviews and observations were transmitted to caregivers for 46 of these patients, in the form of written or oral reports.

Results: The interest of the anthropological approach in the care revolves around three major roles:

1 – Interpreter: Anthropologist highlights potentially problematic representations for the patient's support and identifies the key points to work on with him, particularly in the context of educational programs.

2 – Privileged interlocutor: The qualitative interview and the non-identification of the anthropologist as a caregiver make possible the expression of problems not broached with the rest of the team. Their identification and transmission to caregivers allow them to understand some behaviours of non-adherence.

3 – Mediator: The transmissions enable the team members to leave the medical categorization. The labelling of a patient often reveals a significant gap between the patient's and the caregivers' representations. The anthropologist can restore the communication.

Conclusion: In a care team, the anthropologist becomes the interpreter of patients' behaviours and is a mediator between them and the caregivers. Within the educational program, he can participate in educational diagnosis. The benefits for the patient lie in the possibility of a particular narrative experience, and in the improvement of the therapeutic relationship.

P97-0138 EXPERIENCE OF PAEDIATRIC RENAL TRANSPLANTATION IN SALOUL HOSPITAL- SOUSSE - TUNISIA

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Purpose: The development of a new pediatric transplant program in Sousse, Tunisia as a result of a collaboration with the International Society of Nephrology (International Society of Nephrology - Renal Sister) Sister.

Methods: We made a retrospective study of 10 pediatric renal transplant from living related donors during two successive periods of five days in June 2010 and May 2012, the medical and surgical complications were noted.

Results: Ten children (2 girls and 8 boys) who were on dialysis whose median age was 14 years, ranging between 7 and 24 years with a mean weight and mean body surface area of 24 m2 kg and 0.8 respectively. They were transplanted in the Department of Nephrology at the Hospital Sahloul, they were transplants from living donors.

Waiting times were 0.7 to 8.3 years (median 3.2 years). The causes of chronic renal failure include nephronophthisis (2 cases), multicystic renal dysplasia (1 case), renal hypoplasia (1 case), HSF secondary (1 case) and 5 cases of reflux nephropathy (2).

Donors are fathers in 5 cases, in 3 cases the mother and cousin in 2 cases. Interventions were carried out in the open, and the grafts were placed intraperitoneally with anastomoses of the right common iliac artery with venous drainage into the inferior vena cava.

All children received Basiliximab combined immunosuppression, tacrolimus, mycophenolate mofetil and corticosteroids.

Medical complications include diarrhea (3 children), 3 cases of sepsis, seroma (2 cases) and one case of hemolytic uremic syndrome requiring conversion to Tacrolimus Cyclosporin A.

One patient developed graft dysfunction in obstructive due to a large subcapsular hematoma requiring surgical evacuation major emergency with a favorable and normalization of renal function.

No complications were noted among donors.

During follow-up, four patients required treatment with GH and 5 received antihypertensive treatment. For the first group of children was 2 years back, graft function remained satisfactory with an average creatinine clearance (Schwartz) 134 ml / min without proteinuria.

Conclusion: New pediatric transplantation programs are made possible through the combined support of international programs of Nephrology and Renal Transplant program (ISN) involving experienced pediatric surgeons and pediatric nephrologists working with units where adult transplant programs already exist. Important work with local team meetings to discuss cases can make the implementation of such a program possible with favorable results.

P98-0166 FIRST SIMULTANEOUS KIDNEY – ADRENAL GLAND – PANCREAS TRANSPLANTATION: OUTCOME AT 6 MONTHS

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Introduction: Adrenal insufficiency leads to impaired patient survival and quality of life despite hormone replacement therapy. It can be associated with type 1-diabetes in Polyendocrinopathy. We report the first simultaneous kidney - adrenal gland - pancreas transplantation.

Patient and methods: The recipient was a 33-years-old woman with autoimmune adrenal insufficiency associated with type-1-diabetes complicated with stage IV renal disease and severe neuropathy. She was referred for simultaneous kidney - adrenal gland - pancreas transplantation because of unstable diabetes with severe hypoglycemia and the occurrence of two acute adrenal crises despite replacement therapy.

Transplantation was performed from a deceased donor. The left kidney was used to keep the adrenal vasculature in relation to renal artery and vein and perform kidney transplantation in normal vascular conditions. Immunosuppression associated thymoglobulin, tacrolimus, mycophenolate mofetil and prednisolone.

There was no surgical complication. Transplantation was complicated with a cytomegalovirus primary infection.

Kidney and pancreas function recovery was immediate. Hormone replacement therapy was stopped at 3 months. MIBG scintigraphy combined with a CT scan showed a good fixation of the adrenal graft.

At 6 months, glomerular filtration rate (MDRD estimate) was 61 mL/min/1,73m2 without proteinuria. Pancreatic function was normal. The basal rate of cortisol and aldosterone were normal. After stimulation with 250μg Synacthen, they increase by 58% and 34% respectively. This partial response could be explained by the maintenance of 5 mg of prednisolone.

Conclusion: This case demonstrates that kidney - adrenal gland - pancreas transplantation is safe and permits the correction of adrenal insufficiency. Transplantation of adrenal gland en-bloc with the left kidney appears to be a good therapeutic option in patients with adrenal insufficiency awaiting kidney or kidney - pancreas transplantation.

P99-0093 VALIDATION OF THE EMIT TACROLIMUS ASSAY ON A COBAS C111 AND COMPARISON TO LC-MS/MS IN TRANSPLANTATION

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Introduction: Tacrolimus (TAC) determination can be performed using immunoassays (IA) or liquid chromatography-tandem mass spectrometry (LC-MS/MS: the reference method). In our laboratory, IA is used on week-end duty periods and LC-MS/MS in weekly routine. This work aims to validate the performance of the EMIT assay on a recently acquired Cobas C111 analyser (Roche Diagnostics), and to compare the results with those of LC-MS/MS.

Methods: Validation of TAC using IA is performed according to EMA recommendations (2011). The comparison of the two techniques is performed using $n = 119$ TAC blood samples measured in lung, kidney, liver and heart transplant recipients. Spearman correlation, Passing-Bablok linear regression and bias between methods (Bland-Altman) are studied using the Analyse-it software.

Results: IA quantification limit is 2.5 ng/ml (<15%) and linearity ranged from 0 to 30 ng/ml. Accuracy and precision are good (CV<20%). The analysis of all concentrations shows r = 0.92, a mean bias of 0.4% (C111 = −0.20 + 1xLC-MS/MS). Similar results are observed for "low" (<7ng/ml; $n = 50$) or "high" TAC levels (>7 ng/ml; $n = 69$). Independent analysis of the concentrations of renal ($n = 37$) and lung ($n = 25$) transplant patients gives similar results whereas IA tends to overestimate liver transplants concentration ($n = 22$; + 8.2%).

Conclusion: The IA assay meets the EMA 2011 validation criteria. Assay linearity encompasses TAC expected clinical concentrations. The two methods are correlated. Contrary to what is reported in the literature, no obvious overestimation was observed with IA except in the case of liver transplants, but the number of samples is insufficient to conclude formally. The impact of these differences on TAC dose adjustment during on call duties is limited but remains to be studied according to the kind of organ transplant patients and the range of concentration.

P100-0098 PELVIC RETROPERITONEAL FIBROSIS MIMICKING MEGA URETER DISCOVERED AT TIME OF RENAL TRANSPLANTATION

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Introduction: Retroperitoneal fibrosis (RF) is a rare disease, typically with an insidious clinical course. Although usually regarded as an obstructive uropathy, there has been growing recognition of the condition as a generalized disease.

Case: A 26 year-old man, was on hemodialysis for 3 years because of chronic interstitial nephropathy. He presented on 2008 with end stage renal failure. Abdominal ultrasound at the time showed bilateral hydronephrosis with bilateral calculi. The kidneys were small with destroyed renal parenchyma. Renal function did not improve after surgery and he was on haemodialysis. Retrograde urethrocystography performed in pre-transplant evaluation was normal. CT scan revealed bilateral hydronephrosis and MRI showed hydronephrosis and that the ureteral dilatation stopped at pelvis. This aspect was consisted with bilateral mega ureters. Kidney transplantation was performed on May 2011. Per-operatively, a fibrous mass surrounding ureters was discovered. Histological specimen showed an extensive fibroblastic proliferation with inflammatory infiltrate. There were neither malignant cells nor granuloma. Re reading of MRI performed on pre transplantation as in favor of RF. Laboratory tests revealed no inflammatory syndrome, immunological tests were negative (antinuclear antibodies, complement, anti LKM1, anti-smooth muscle, anti-mitochondria, ANCA) with no abnormalities of thyroid tests. In addition to his immunosuppressive therapy, the patient was treated with prednisone 1 mg/kg/d for 2 months after transplantation to avoid extension of fibrosis to graft ureter. Eight weeks later, monitoring with MRI showed an important regression of the bilateral ureteral dilatation and prednisone as tapered.

Conclusion: We reported a late and atypical presentation of pelvic fibrosis. Diagnosis of RF should be suspected in patients with acute renal failure and hydronephrosis without an obvious obstacle. Early diagnosis and treatment may avoid fibrosis extension.

P101-0111 CHANGES IN PLASMA AMINO ACID LEVELS: A MINIMALLY INVASIVE INNOVATIVE WAY TO DIAGNOSE INTESTINAL REJECTION IN PIGS

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Background: There is to date no reliable biomarker of intestinal acute cellular rejection (ACR). As small intestine is the primary organ responsible for terminal digestion of proteins and absorption of amino acids, our objective was to determine whether plasma amino acids may be used as markers of ACR using a model of allogenic small bowel transplantation (SBT) in pigs.

Methods: Pigs were divided into group 1 (n = 8; controls; segmental autotransplantation), group 2 (n = 8; allotransplantation; non-immunosuppressed recipients), and group 3 (n = 8; allotransplantation; immunosuppressed recipients). Intestinal specimens for histological studies were obtained at the end of cold flushing (T0), and on postoperative day 8 (T1). Plasma amino acids levels were measured on samples harvested at T0 and T1.

Results: In groups 1 and 3, intestinal histology revealed no significant changes between T0 and T1 specimens. In group 2, graft histology revealed moderate to severe rejection on T1 specimens. Seven plasma amino acids were significantly correlated with the occurrence of acute intestinal rejection: phenylalanine, aspartate, citrulline, taurine, glycine, isoleucine, and tyrosine. For each marker, a cut-off level which would be felpful for clinical use to decide between rejection or not was determined and a score was built. An ACR was found in 100% of cases when the score was equal to 4 (Se = Sp = 100%; AUC = 1).

Conclusion: Our study suggests for the first time that seven plasma amino acid levels may be used in combination as markers of intestinal rejection.

P102-0096 NEW ONSET DIABETES AFTER KIDNEY TRANSPLANTATION: INCIDENCE AND RISK FACTORS IN A COHORT OF 287 PATIENTS

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Introduction: New onset diabetes after kidney transplantation (NODAT) is a well documented complication. It is considered as a risk factor for cardiovascular disease and is also associated with poorer graft survival and a high morbidity and mortality. We evaluated the incidence of diabetes in our transplant patients and tried to identify the risk factors inherent to its occurrence.

Methods: Between December 1994 and Mars 2010, 287 patients underwent kidney transplantation of which 33 had developed NODAT. Diabetes was defined by a two time fasting glucose ≥1.26 g / l. All the analysis and calculations were performed using an SPSS version 11.0. The results were presented as mean + standard deviation for continuous variables and as proportion for categorical variables. Differences between the groups were examined with Student's t-test. Categorical variables were assessed using chi-squared analysis. Multiple logistic regression analysis was used to determine the risk factors of NODAT. A p-value of less than 0.05 was considered significant.

Results: 33 patients (11.6 %) developed NODAT. Mean age of patients is 38.24 (18 − 62). 33.4% of patients in group 1 were above 45 years versus 16.2% in group2 (P = 0.039). The average time of occurrence of NODAT was 13.8months (2days-128 months). Over half (52.2%) of the recipients developed NODAT in the first three months. Twenty five patients had presented at least one acute rejection. These rejection episodes were histological proven in nine patients. NODAT occurred simultaneously to acute rejections episodes in 6 cases. 34.8% of patients in group1 had presented at least one acute rejection episode versus 14.5% of patients in group 2 (P = 0.02). Multivariate logistic regression analysis demonstrated that independent risk factors of NODAT are: acute rejection, use of tacrolimus, recipient age more than 45 years, male gender, and HLA B27 and HLA DR8.

Conclusion: Older recipient age, acute rejection episodes and use of tacrolimus are the main risk factors for NODAT. Finally, NODAT was not associated with poorer graft or patient survival. Long-term follow up will allow in the future specifying morbid-mortality.

P103-0117 CHRONIC INFLAMMATORY COLITIS IN INTESTINAL TRANSPLANT RECIPIENTS

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Objectives and Study: De novo inflammatory bowel disease has been described post intestinal transplantation. Our aim was to determine the incidence of severe chronic colitis in transplanted grafts.

Methods: Medical data from the first 100 pediatric intestinal transplant recipients at Hospital Necker, Paris were reviewed focussing on the occurrence of colitis in the graft.

Results: Over a 17 1/2 yr period (3/1994−9/2011) 100 intestinal transplants were performed in 92 patients.Graft was lost in 49 (53.2%) patients and 46 (50%) were deceased by 11/2011. Fifty seven patients received a combined small intestinal/colon transplant, of these 28 (49,1%) were deceased. Mean age at transplantation was 5,8 yrs (range:1,5−19,1). Underlying diagnoses were Hirschprung's disease (18), epithelial dysplasia (12), microvillous inclusion disease (11), surgical short gut (6), intestinal pseudobstruction (9) and atresia (1). Nine (15,7%) patients developed colitis. Their mean age at transplantation was 5,4 yrs (range:2,2−8,5), 3 patients had a liver transplant, familial history of inflammatory bowel disease or allergies was never mentioned. Anti-rejection strategy was similar in all patients (basisliximab/corticoids/tacrolimus). Their indications for transplantation were Hirschprung's disease (4), epithelial dysplasia (2), microvillous inclusion disease(1), surgical short gut (1) and intestinal pseudobstruction (1). Mean interval between transplantation and ostomy closure was 8 mths (range:1−21). Colitis symptoms appeared after 4.8 yrs (range:1−12). All presented signs of inflammation (elevated CRP), in 7/9 patients an infectious agent was identified at presentation (Campylobacter:2,EBV:2, norovirus:2, cryptosporidium:1). Endoscopy showed ulcers of variable severity, histology mixed inflammatory infiltrates often eosinophilic (4/9). There were no sgins consistent with rejection Stenosis of the graft's ileocaecal valve caused severe persistent problems in 3 patients of which 2 had presented with norovirus. Patients were treated with parenteral nutrition (5), steroids (4), anti viral agents (3), infliximab (3), mesalazine (1) or surgery (2). At follow-up 1 patient was deceased, 6 stable but 2 after graft removal, 2 with residual ileocaecal valve stenosis, one with proximal fistula.

Conclusion: In summary, infections occur frequently but some cases progress to severe chronic colitis and/or ileocaecalvalve stenosis. Since the pathophysiology of his type of colitis is unclear, a rational therapeutic strategy remains to be determined.

P104-0115 **INTESTINAL TRANSPLANTATION IN A PATIENT WITH SUPERIOR VENA CAVA THROMBOSIS**

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Introduction: In patients undergoing small bowel transplantation, the current consensus is to avoid transplanting patients with insufficient vascular patency to guarantee easy central venous access for up to 6 months following transplantation. Here we present the case of a patient who received an intestinal transplant despite obstruction of the superior vena cava (SVC).

Case report: A 60-year-old woman with myopathic chronic intestinal pseudo-obstruction received an isolated small bowel transplantation in October 26th, 2011. The pretransplant work-up revealed extensive veno-occlusive disease involving both upper limbs, both internal jugular veins, both subclavian veins, the left innominate vein, and the SVC above the azygos vein. During transplantation, a 12-French double-lumen Hickman catheter was placed in the left femoral vein with the tip of the catheter positioned just distal to the retrohepatic IVC. At the end of surgery, the Hickman catheter was replaced by a triple-lumen CVC. The total volume infused was 20000 mL. Eighteen hours after surgery, the patient presented with sudden cardiopulmonary arrest associated with airway obstruction. She had a large facial and neck edema that did not allow visualization of the larynx with a laryngoscope. Reintubation was rendered possible through the oral route with the use a pediatric fibreoptic bronchoscope using the guided technique. She recovered after active resuscitation and mechanical ventilation. The diagnostic of acute superior vena cava syndrome (SVCS) was made. SVCS was treated with drastic reduction of intravenous perfusion, changing of bed position with head elevation, diuretics, and intravenous heparin. In order to avoid recurrence of superior vena cava syndrome with airway obstruction, a preventive tracheotomy was performed on postoperative day 14. Ten months after transplantation, the patient is well on tacrolimus and steroids, with a normal oral diet.

In conclusion, our case emphasizes that small bowel transplantation should be avoided in patients with SVC thrombosis. If small bowel transplantation is done however, tracheotomy performed before transplantation may be discussed in order to avoid a post-transplant SVCS.