LETTER TO THE EDITORS

Successful pregnancy after ABO-incompatible kidney transplantation

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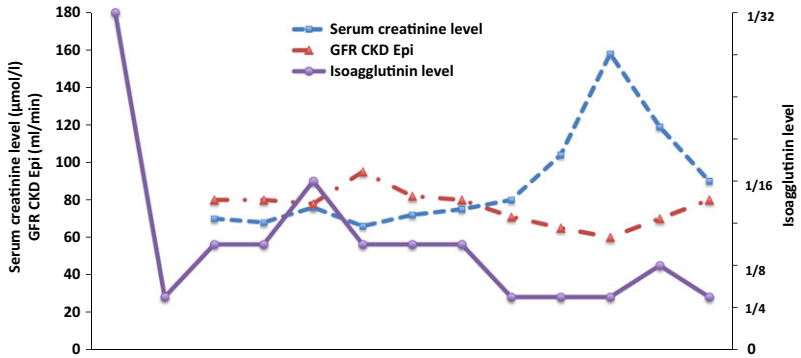
Dear Editors,

Pregnancy after kidney transplantation is usually safe and successful [1]. However, only one case of successful pregnancy has been reported after ABO-incompatible kidney transplantation [2]. Herein, we report on the case of a 32-year-old non-HLA-sensitized woman who underwent a first pre-emptive unrelated living-donor ABO-incompatible kidney transplantation (A2→O) for lupus nephritis without antiphospholipid syndrome.

Initial anti-A2 isoagglutinin level was 1/32. After a desensitization protocol that included two rituximab infusions (375 mg/m^2 on days 7 and 1 before transplantation), four plasma-exchange sessions, and four specific immunoadsorption sessions, isoagglutinin level had decreased to 1/2. At transplantation, she was given thymoglobulin as an induction therapy, and tacrolimus, mycophenolic acid (MPA), and steroids were started at 10 days before transplantation. No surgical complications or delayed graft function occurred.

At day 10 post-transplantation, a systematic kidney biopsy revealed the presence of only one thrombus in one glomerulus. The rest of the biopsy was considered normal and, as expected, C4d staining was positive. As the isoagglutinin level had increased to 1/10, and despite normal kidney function (creatinine level of 64 µmol/l, estimated CKD-Epi glomerular filtration rate of 82 ml/min), she underwent two plasma-exchange sessions. The post-transplant period was then uneventful: kidney function remained stable, she had no pro-



	Before KT	KT	Month 1	Month 6	Month 12	Month 24	Month 30	Pregnancy	Month 3 after pregnancy	Month 6 after pregnancy	Delivery	Month 1 after delivery	Month 3 after delivery
SBP (mmmHg)	120	120	120	120	130	140	140	130	130	140	130	150	130
DBP (mmHg)	70	70	70	80	80	80	80	80	80	80	80	90	80
Tac CO (ng/ml)	–	9	7.4	8	9.3	5.4	6	5.1	11	10	5	10	9
MPA (g/d)	–	2	2	2	2	2	Aza	Aza	Aza	Aza	Aza	2	2
Steroids (mg/d)	–	15	10	5	5	5	5	5	5	5	5	5	5
Proteinuria (g/l)	0	0	0	0	0	0	0	0	0	0	0	0	0
Anti-HLA Ab	neg	neg	–	neg	neg	neg	–	–	neg	–	–	–	neg

Figure 1 Outcome of biological parameters before and after pregnancy. Abbreviations: GFR, glomerular filtration rate; KT, kidney transplantation; SBP, systolic blood pressure: DBP, diastolic blood pressure; Tac, tacrolimus; C0, trough level; MPA, mycophenolic acid; anti-HLA ab; anti-human leukocyte antigen antibodies.

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teinuria, and a kidney biopsy performed at 24 months was considered normal.

At 30 months post-transplantation, she desired pregnancy. She had no obstetric and gynecological history. Mycophenolate acid (MPA) was replaced by azathioprine (150 mg/day). At 2 months after the switch, she became spontaneously pregnant. At 5.5 weeks of gestation, beta-human chorionic gonadotropin concentration was 1273 IU/l and the gestational sac measured 7 mm. Aspirin was given at a daily dose of 100 mg. During pregnancy, blood pressure and anti-A2 isoagglutinin level remained stable and no proteinuria or anti-HLA antibodies were detected. However, kidney function became impaired at 6 months after the start of pregnancy (Fig. 1). At that time, kidney ultrasonography was considered as normal. The isoagglutinin level was unchanged. There was no cytomegalovirus or BK virus replication. Anti-HLA antibodies were undetectable. There was a mild elevation in tacrolimus trough level (10 ng/ml). Therefore, no kidney biopsy was performed. Only tacrolimus dose was decreased. At 35-week gestation, she was vaginally delivered because of intrahepatic cholestasis during pregnancy (elevated fasting serum bile acids). The newborn was a healthy girl with a birthweight at 2400 g. Her blood group was A. The newborn had no jaundice and was discharged uneventfully. The patient did not breastfeed her baby. At 1 month after delivery, she was converted from azathioprine back to MPA. Kidney function then improved and returned to baseline values at 3 months after delivery.

This case report shows that, despite a transient impairment in kidney function, pregnancy is possible after ABO-incompatible kidney transplantation, and does modify isoagglutinin levels.

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