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Immunoabsorption (IA) with Glycosorb column in ABO- incompatible living donor kidney transplantation: First paediatric case in Hong Kong

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Objectives : The development of specific desensitization regimens has significantly improved the outcome of ABO incompatible (ABOi) living donor kidney transplant in many well-established centres across the world. This is the first case of ABO incompatible living donor kidney transplantation done in Hong Kong Children's Hospital, accomplished by the collaboration between the Paediatric Nephrology team and Paediatric Haematology and Oncology nursing team for supporting the apheresis immunoabsorption instead of conventional therapeutic plasmapheresis (TPE).

Methods : A 13-year-old boy with APRKD has been put on haemodialysis for 5 years since April 2018. He was highly sensitized to the local population and therefore the chance of receiving a transplant from a deceased donor was slim. ABOi transplant was contemplated with mother as the donor, and the pair was HLA compatible. Rituxumab was given 4 weeks prior to transplant, followed by induction with basilixumab, and maintenance immunosuppressants with prednisolone, tacrolimus and mycophenolate mofetil. A trial run of glycosorb was performed 3 months prior to the actual apheresis session., A total of 4 sessions of immunoabsorption with Glycosorb ABO column on an apheresis machine prior to kidney transplant. The patient had a post IA anti-B titre of <1:2 prior to transplant, which permitted ABOi transplant to proceed with success.

Results : From the trial run with IA, the anti-B IgG titer dropped from 1:128 to 1:16. With the subsequent four sessions of IA done 4 days before transplant, the initial anti-B IgG titer of 1:64 dropped to <1: 2 (target is < 8) on the day of transplant surgery, which was uneventful. The Anti-B titre remained to be <1:4 3 months post transplant. The patient is currently 6 months post transplant with excellent kidney function.

Conclusions : Immunoabsorption is a safe and effective option for use in children for ABOi transplant.