

OUTCOMES OF AB0 INCOMPATIBLE LIVE DONOR KIDNEY TRANSPLANTATIONS IN LATVIA

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INTRODUCTION

Kidney transplantation offers the best survival and quality of life among all kidney replacement therapies. Live donor transplantation is challenging in AB0 incompatible transplants. Modern advances have overcome the incompatibility of blood groups in the AB0 system.

METHODS

We aimed to analyze and compare the results of living donor kidney transplants incompatible with AB0- (AB0i) and compatible with AB0- (AB0c). A comparative cohort study (1:2) was performed comparing AB0i vs. AB0c living donor kidney transplants from October 2012 to December 2022 at Pauls Stradins Clinical University Hospital. Thirty-three patient outcomes were analyzed for at least 3 years post-transplant.

RESULTS

Eleven AB0i (male 72.7%, age 28.0 ± 8.4 years) cases matched with 22 AB0c (male 77.3%, age 32.0 ± 9.2 years) controls showed comparable graft function: eGFR (ml/min/1.73m²) of 70.5 vs. 70.0 at 1 year ($p=0.23$), 68 vs. 61 at 2 years ($p=0.38$), and 75.5 vs. 59.5 at 3 years ($p=0.18$).

Antibody-mediated rejection occurred in 4 patients in each group, with 1 early rejection in AB0i vs. 4 in AB0c, and 3 late rejections in AB0i vs. none in AB0c.

One-year graft survival was 90.9% in AB0i vs. 95.9% in AB0c, and 3-year graft survival was 90.9% in AB0i vs. 95.5% in AB0c.

One-year patient survival was 100% in both groups, with a 3-year survival of 90.9% (AB0i) vs. 95.5% (AB0c).

AB0i patients had a longer median duration of dialysis at 14 months compared to 8 months for AB0c patients.

CONCLUSION

Our data supports that AB0i live donor kidney transplantation is a successful therapy with minor differences in outcomes compared to AB0c transplants.