

Outcomes of Complex V/S Simple Vascular Anatomy Grafts Following Living Donor Renal Transplant - Experience from a Tertiary Care Center

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Abstract

Background: Living donor renal transplant with grafts having complex vascular anatomy is technically difficult with higher complications. We herein present our experience of complex vascular anatomy living donor renal grafts as compared to grafts with simple vascular anatomy.

Methods: This is a retrospective comparative analysis of a prospectively maintained database of all the patients undergoing live related renal allograft transplant from January 2015 till Dec 2019. All adult transplants with graft with complex vascular anatomy were included and deceased donor and pediatric transplants were excluded.

Results: There were 422 eligible transplant patients out of which 92 (21.8%) patients had grafts with complex vascular anatomy and 330 (78.2%) patients had single renal artery and vein. There were no major intra-operative complications. Warm ischemia time and operating time were significantly less in single artery group ($p < 0.001$). There was no difference in terms of urine output, fall in serum creatinine levels, delayed graft function (4.2% vs. 4.3%), primary graft non function (1% vs. 0.6%), urine leak (2.1% vs. 3%) and hospital stay.

Conclusion: Renal transplant with grafts with multiple renal vessels have equivalent outcomes as compared to simple vascular anatomy. Complex vascular anatomy living donor transplants should be done in high volume centers by experienced surgeons.

Keywords: Renal transplant, Complex vascular anatomy, Recipient outcome