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# RENAL VEIN EXTENSION USING POLYESTER VASCULAR GRAFT IN LIVING DONOR RENAL TRANSPLANTATION: A SAFE AND EFFECTIVE TECHNIQUE

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# DISCLOSURE INFORMATION

- I have NO financial disclosure or conflicts of interest with the presented material in this presentation.



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A short renal vein from a donor kidney poses a challenge during renal transplantation as it can significantly affect the positioning of the renal graft, the subsequent renal artery anastomosis, the length of warm ischemia time, and the overall post-operative renal graft function.

Our patient is a 51-year-old woman with End Stage Renal Disease caused by Adult Polycystic Kidney Disease. She underwent a renal transplant with a left allograft kidney, which was procured through laparoscopic donor nephrectomy. The kidney had a single cuffed double artery and a short single renal vein. A polyester vascular graft was used to extend the renal vein, ensuring a tension-free vascular anastomosis and proper positioning of the renal graft. The graft exhibited immediate and stable function following the transplantation.

Renal vein extension using polyester vascular graft is a feasible and safe technique to address difficulties during vascular anastomosis while reducing the risks of delayed graft function and other associated vascular complications.

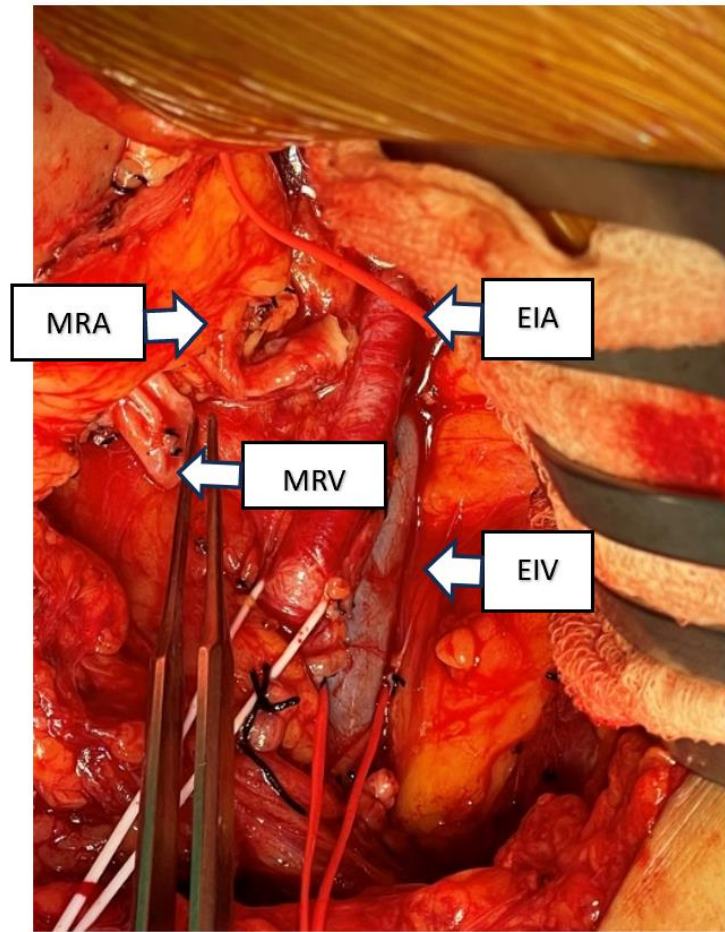


Figure 1 Intraoperative image of the renal graft vessels adjacent to the recipient's external iliac artery and vein showing the distance between EIV and MRV. EIA- external Iliac artery, EIV- external iliac vein, MRA- Main Renal Artery, MRV- Main Renal Vein

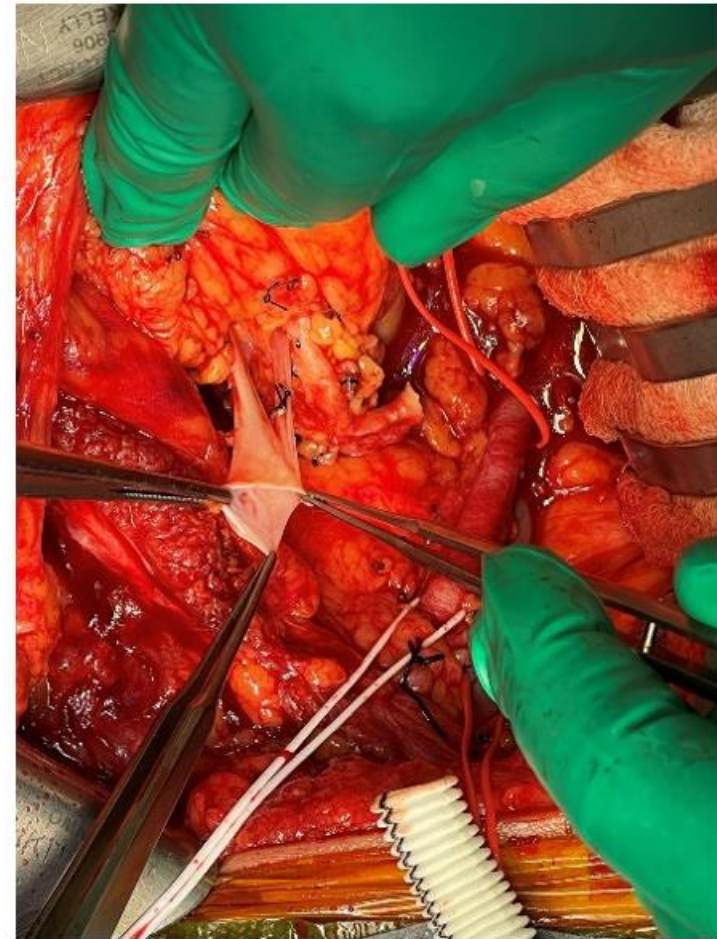


Figure 2 Positioning of Renal Graft before Main Renal Vein elongation using polyester vascular graft



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Figure 3 Main renal vein and vascular graft post anastomosis

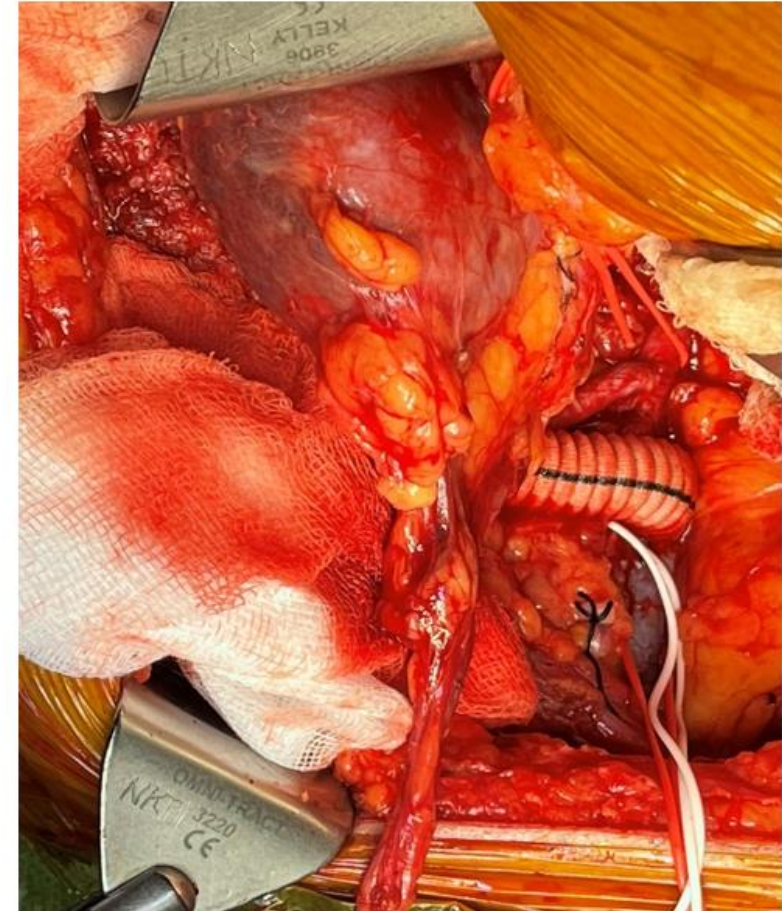


Figure 4 Renal graft post unclamping with vascular graft and main renal artery anastomosed to external iliac artery and external iliac vein respectively



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## Immediately Post-op

- Serum Creatinine: 11.07mg/dl from a baseline of 13mg/dl
- Baseline renal allograft ultrasound: right renal graft normal in size and reniform in shape with no ectasia, lithiasis, or focal parenchymal lesion. Color Doppler imaging showed normal heart rate, pulsatility indices, and peak systolic velocities of the segmental and main renal arteries with good blood flow in the main renal vein. No thrombosis.

## Upon Discharge

- Serum Creatinine: 2.27mg/dl

## 2-month Follow-up

- Serum Creatinine: 1.53 mg/dL
- Follow-up renal allograft ultrasound: reniform right renal graft with normal pulsatility indices and peak systolic velocities of the main renal and segmental arteries, good blood flow in the main renal vein, no thrombosis.



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