

Vascular complexities in renal transplant: Our centre's experience in 6947 cases.

Tarshid Ali Jahangir

Department Of general Surgery and renal transplant

Rabindranath Tagore Narayana Hospital Kolkata

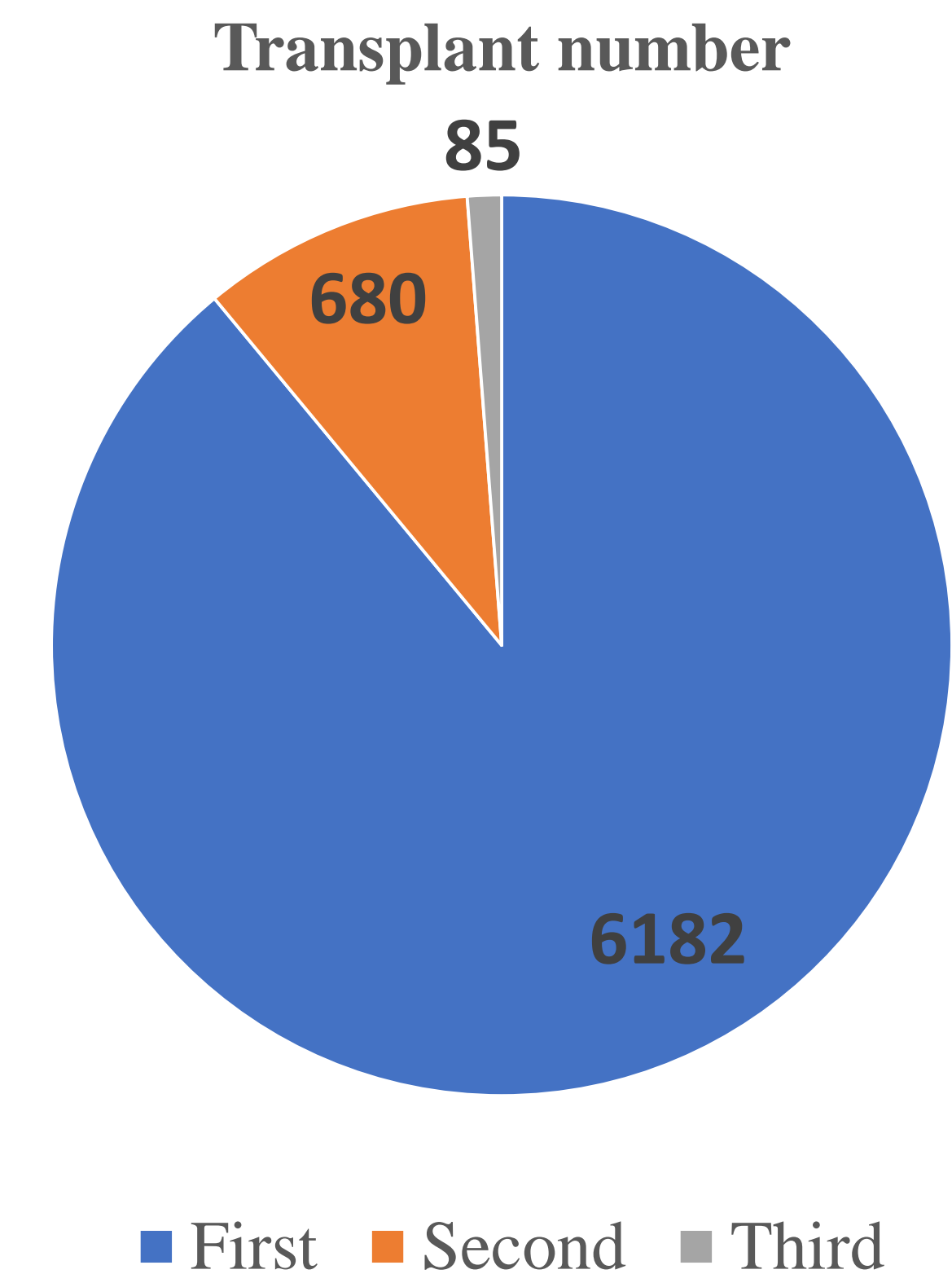
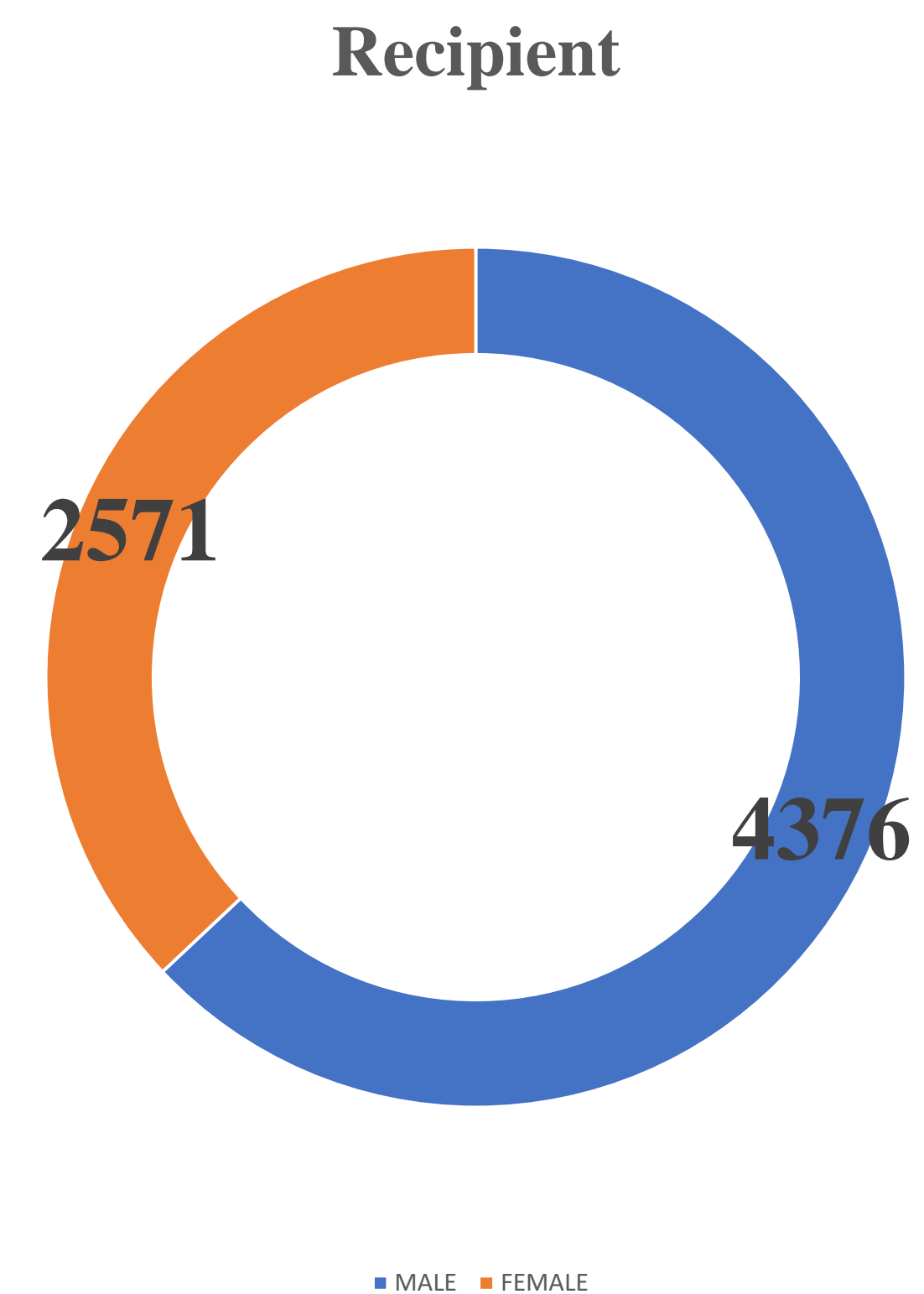
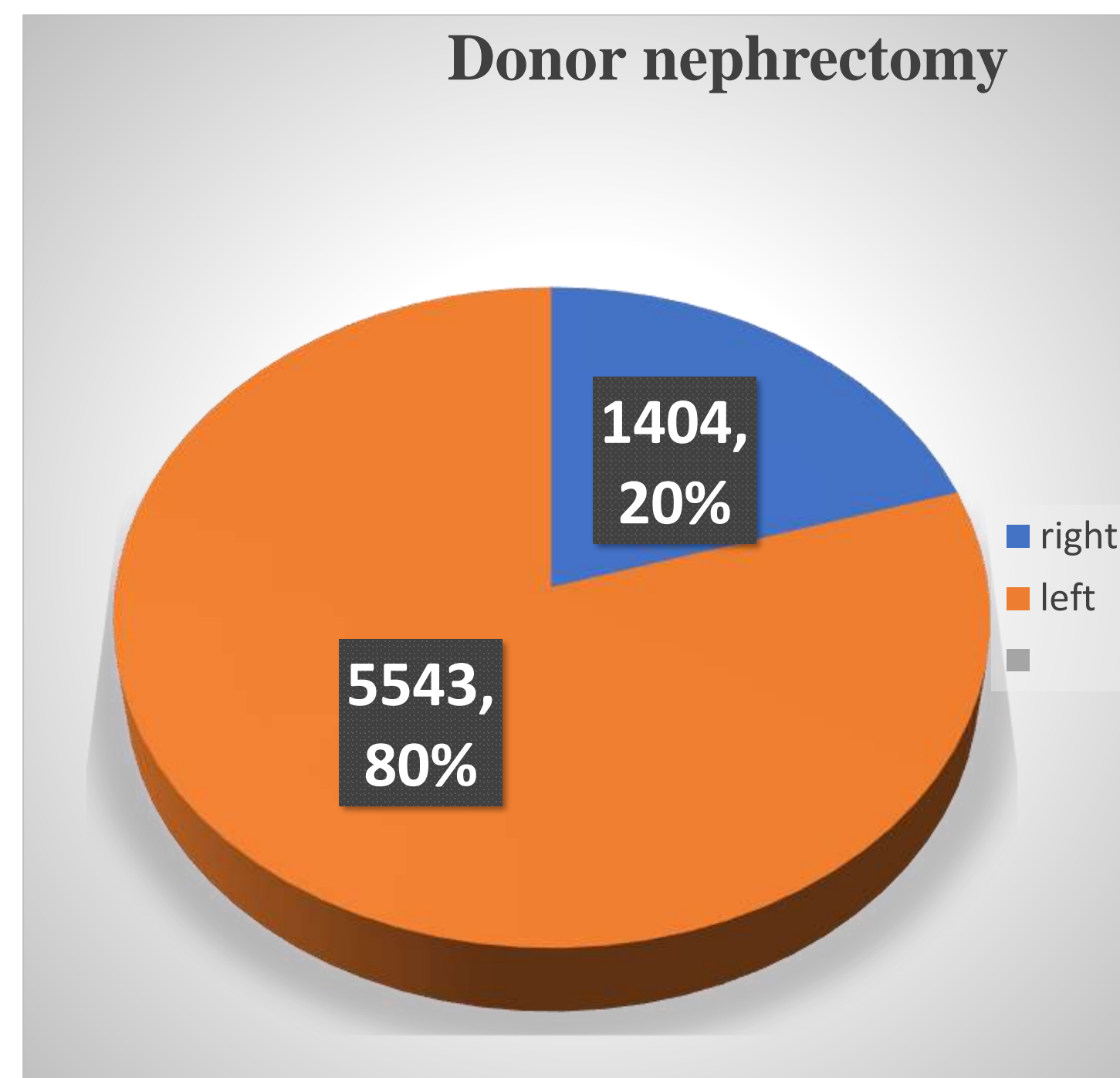
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Introduction

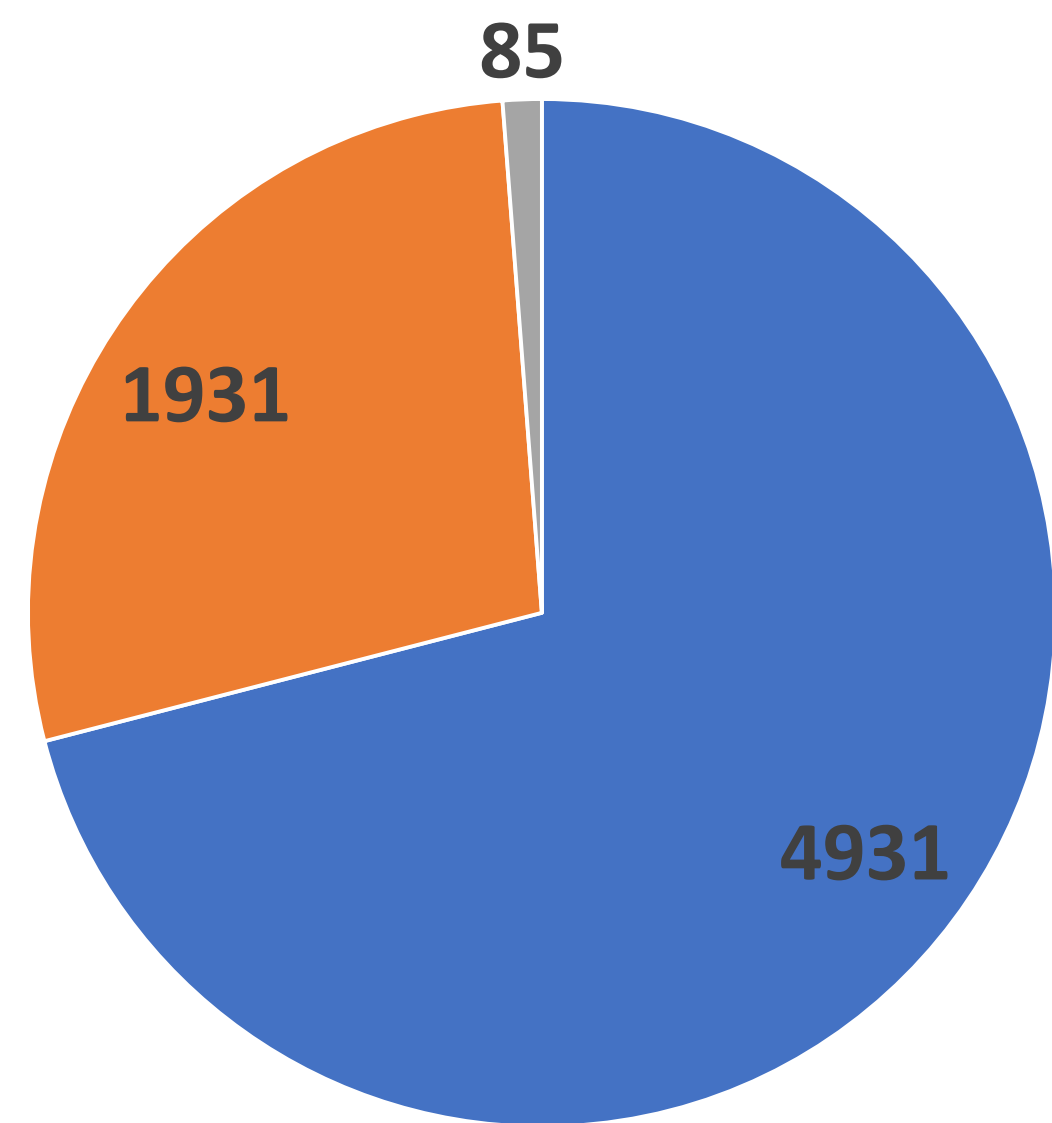
- Renal Transplantation is currently the most effective treatment approach for end stage renal disease with an increase of 1 year survival to more than 95% following transplantation. [1] Accumulated expertise and experience coupled with refined surgical expertise, donor recipient evaluation criteria, organ acquisition and preservation have resulted in decrease of vascular complication incidence to less than 1.5%. [2]
- Vascular complication post renal transplantation are still one of the serious surgical complications which increases morbidity and mortality.[3] The large transplantation register analysis identified older recipients and donor age, extended donor criteria immunosuppression, delayed graft function and ischemic heart disease as the medical determinants of transplant renal artery stenosis whereas the surgical determinants are still under debate and difficult to evaluate in prospective studies. This study entails to throw some light on the vascular complexities in renal transplant which we have encountered in our journey of 6947 cases.
- Financial disclosure: The author declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Materials and methods:

- 6947 cases of renal transplants were prospectively evaluated for vascular complexities and subsequent complications. These included live related, altruistic and deceased donations.
- Results:

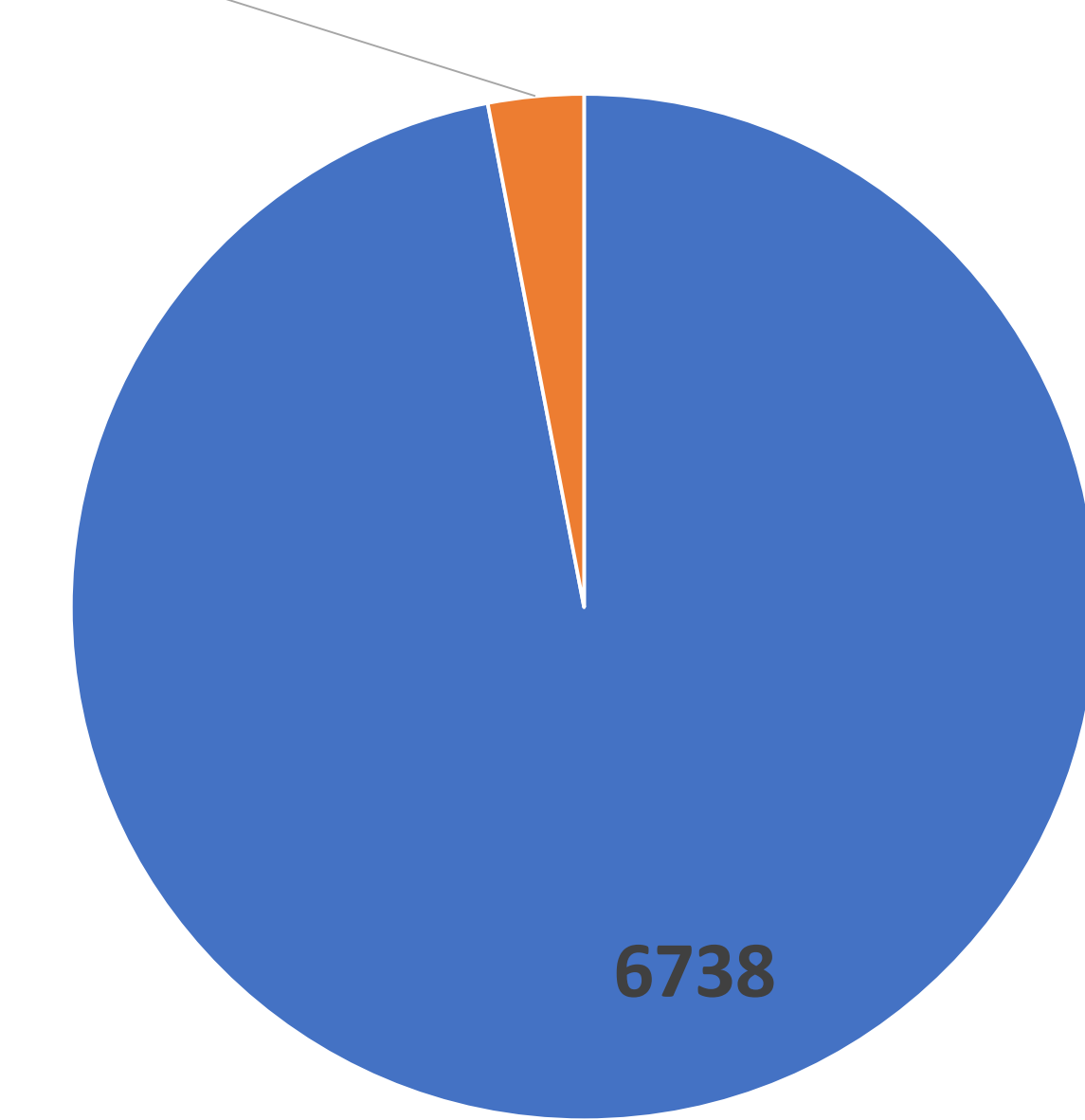


Arterial Anastomosis



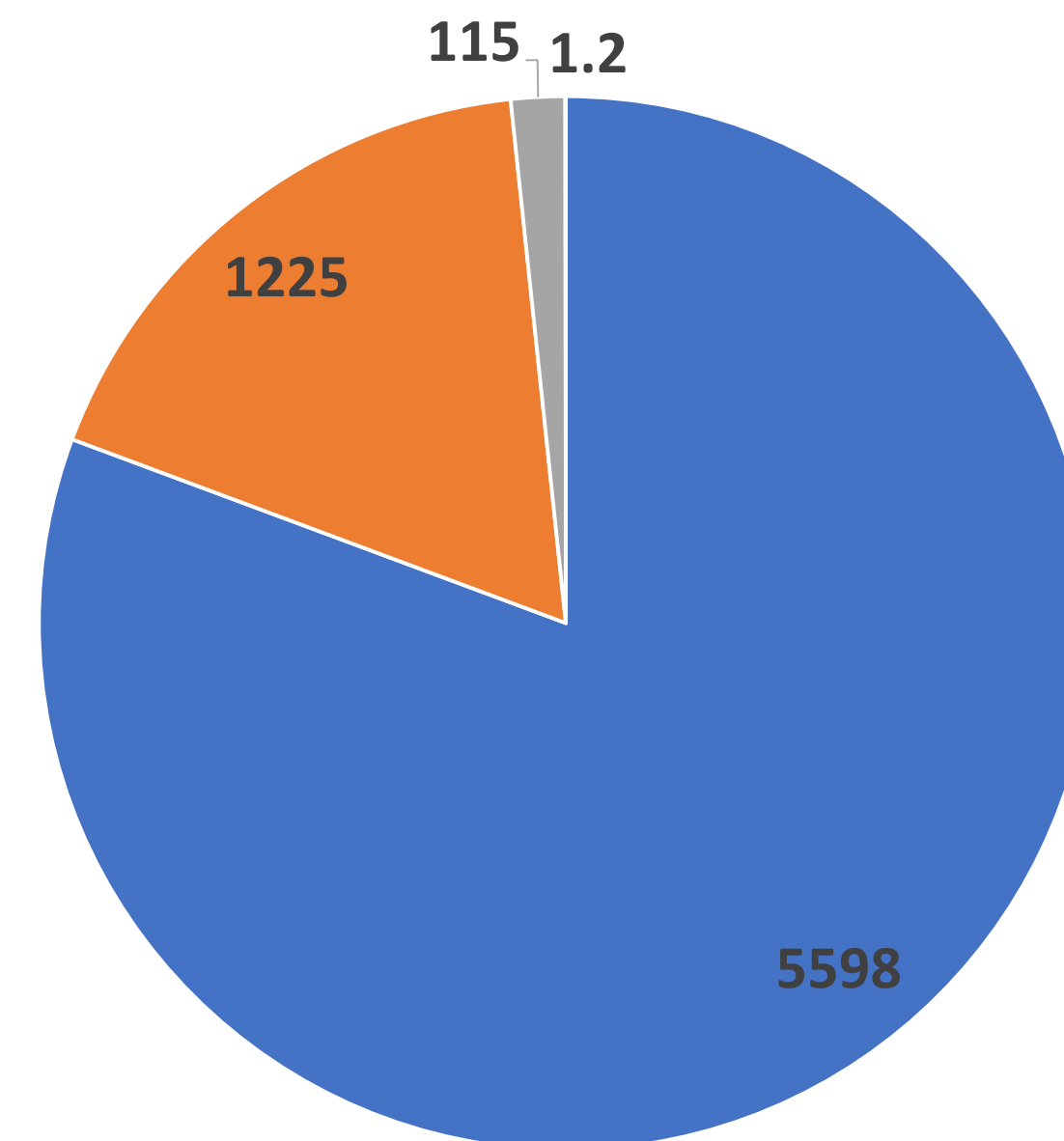
■ External Iliac 4931 ■ Internal Iliac
■ Common Iliac

Venous anastomosis



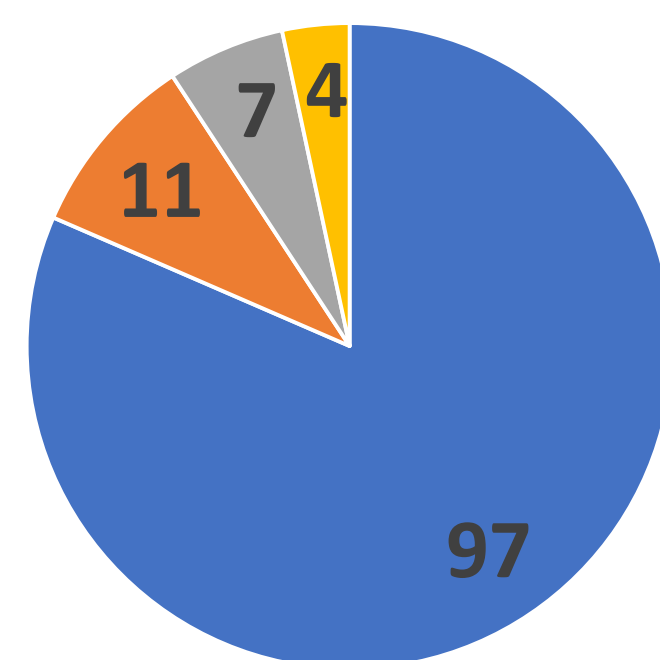
■ External Iliac ■ Common Iliac

Multiple arteries

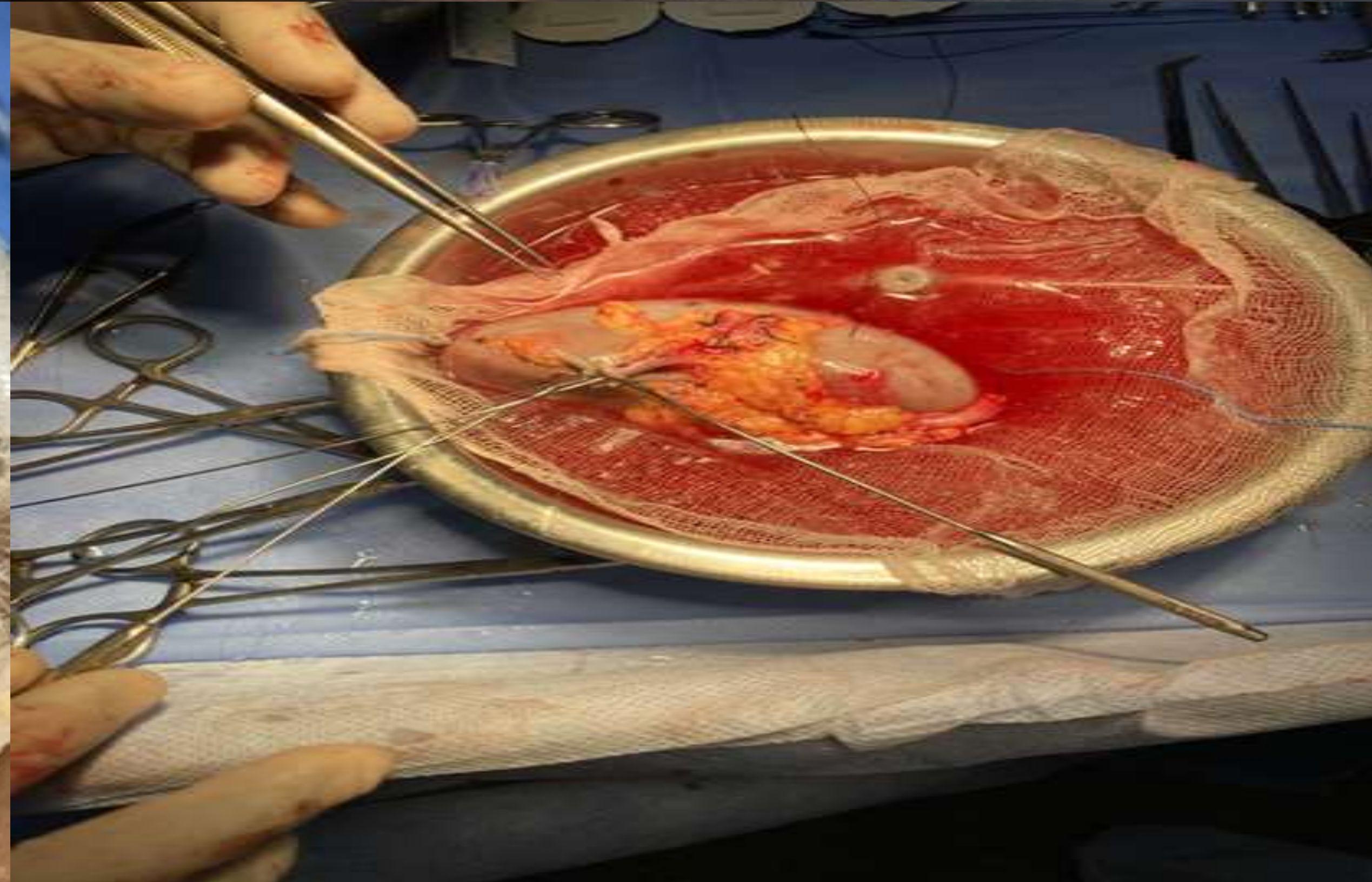
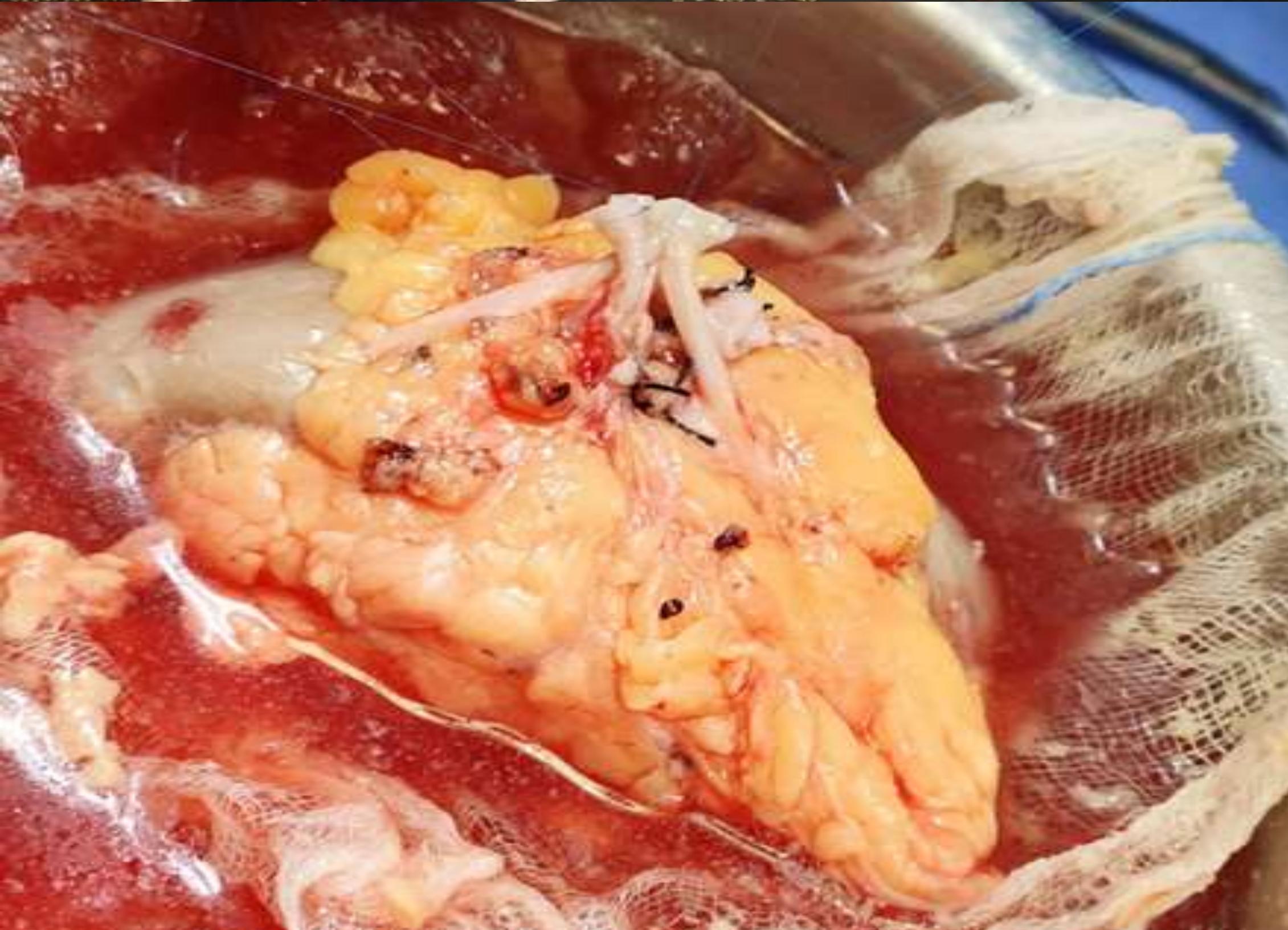
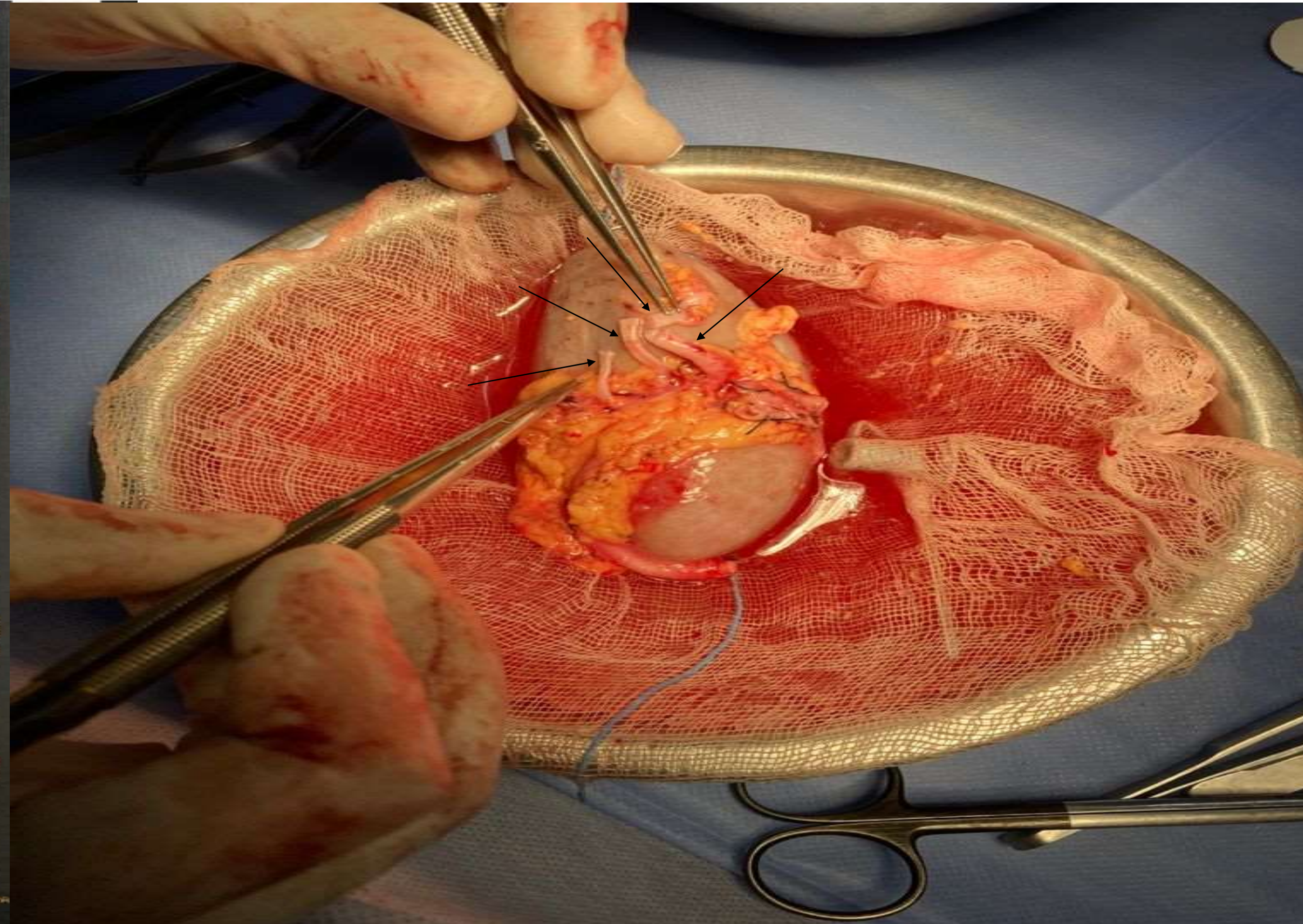
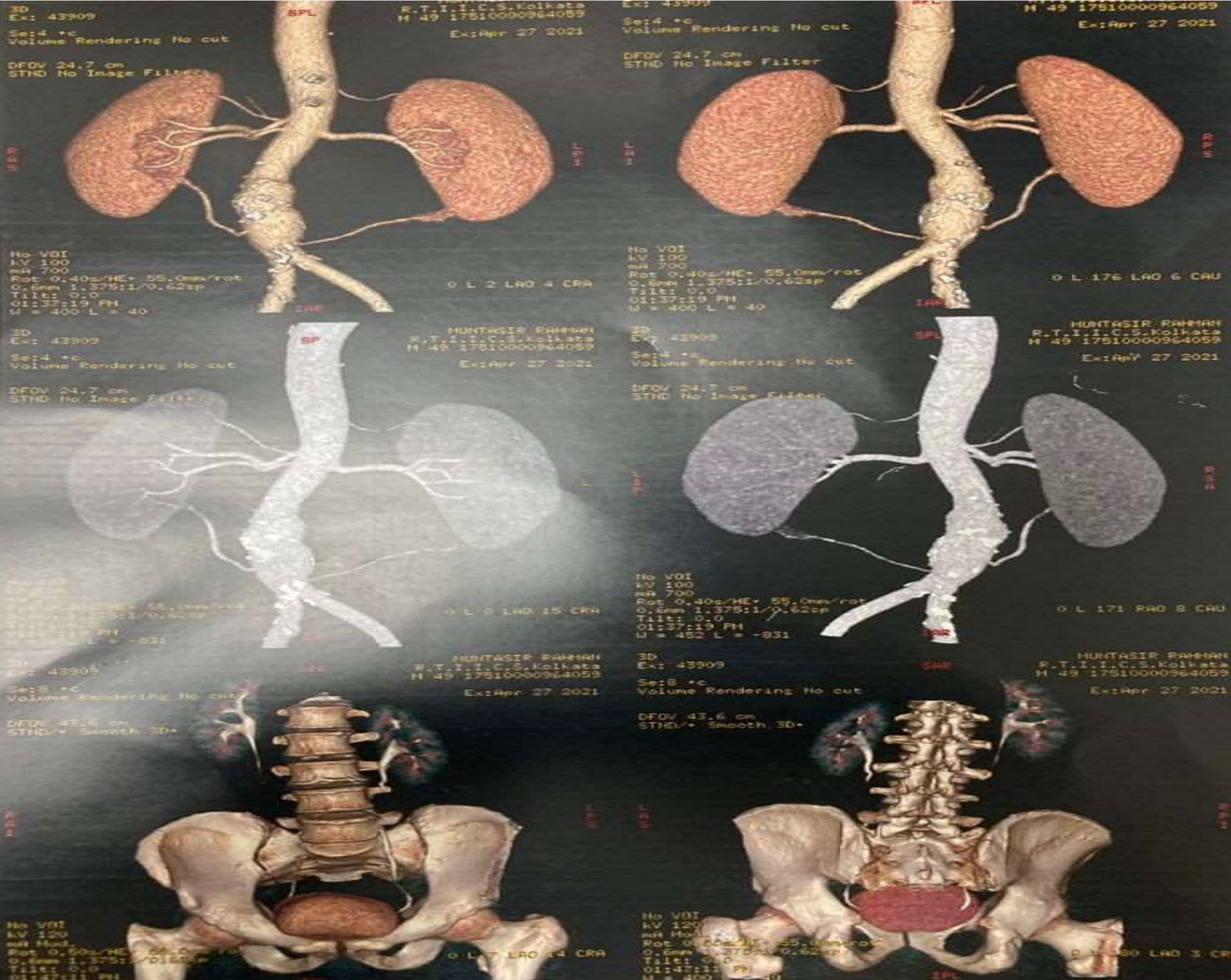


■ Single ■ Double ■ Triple ■ Four

Vascular Complications



■ Bleeding- reexploration
■ RAS
■ RAT
■ RAA
■ RVT

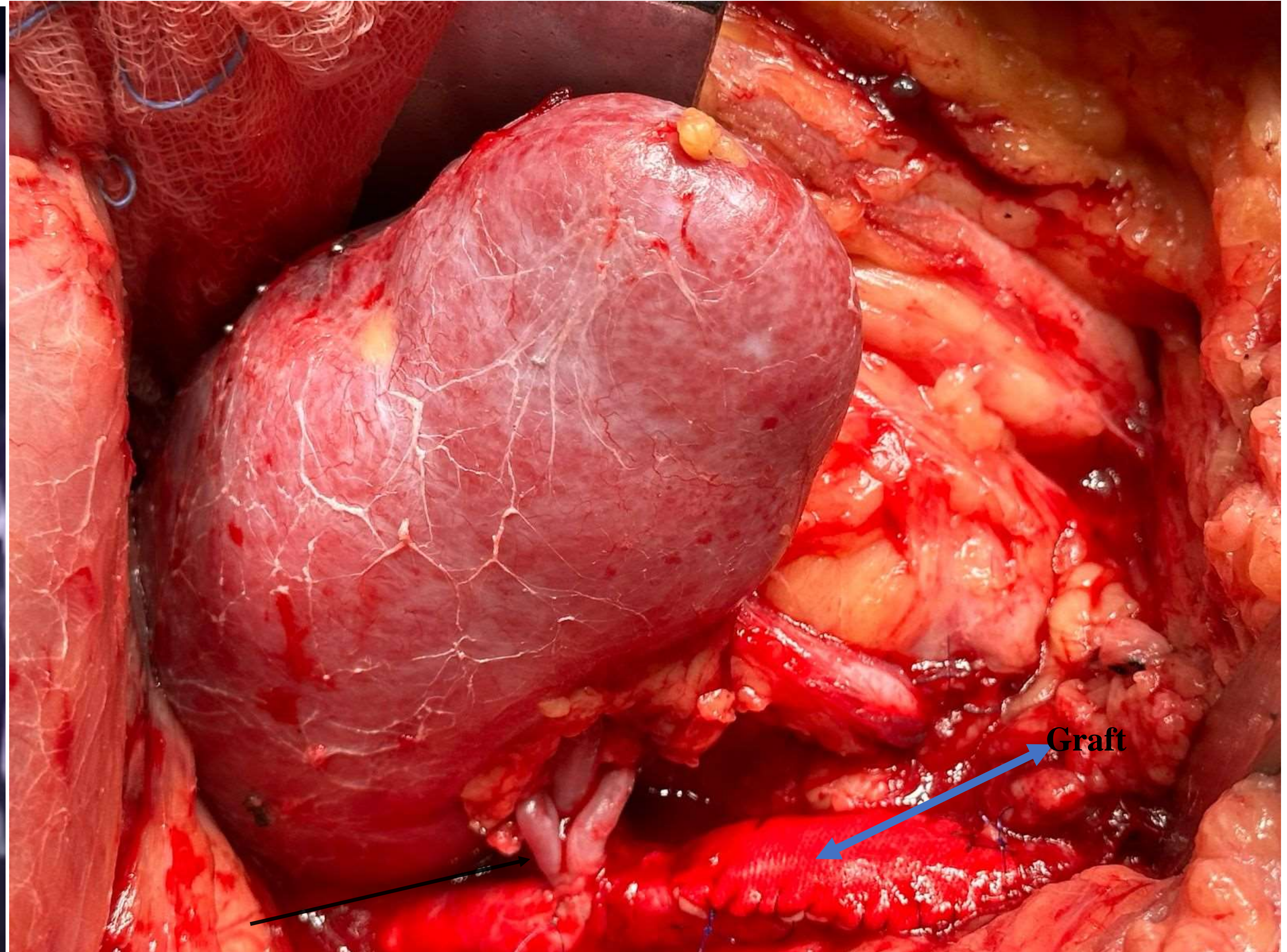




Renal artery aneurysm



Renal artery stenosis



Post Aneurysm Repair and external iliac reconstruction

Conclusion

- Major vascular complications are relatively uncommon after renal transplantation but still constitute an important cause of graft loss in the early postoperative period.
- Renal artery stenosis is correctable with a good interventional radiologist back and is completely salvageable.
- We have managed to salvage Renal artery aneurysm due to the support of the cardiothoracic team maintaining cold perfusion via bypass.
- With the advancement of medical procedures, the surgical steps were gradually standardized, (procurement, preparation and transplantation).
- Education of the surgeons, proper explanation of the kidney, end-to-side anastomosis and standard operating protocol minimized complications.

References:

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4. Hurst FP, Abbott KC, Neff RT, et al. Incidence, predictors and outcomes of transplant renal artery stenosis after kidney transplantation: analysis of USRDS, *Am J nephrol* 2009;30:459