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## **Clinicopathologic profile and outcomes of patients undergoing early and late graft nephrectomy: experience from tertiary care hospital**

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**Objectives :** To determine the clinicopathologic profile of patients undergoing early and late graft nephrectomy

**Methods :** A ten year retrospective analysis of graft nephrectomy cases was performed from January 2014 up to December 2023. Clinical presentation, immunological profile, biochemical parameters were obtained from hospital records. Follow up was recorded from medical records and by telecommunication with patients as required. Histopathology changes in the graft nephrectomy specimen were retrospectively analyzed in detail by an experienced renal pathologist and were evaluated in detail along with C4d immunohistochemistry in both early and late graft nephrectomy specimen.

**Results :** A total of 59 patients underwent early graft nephrectomy during study period. Majority of the patients in our cohort underwent early graft nephrectomy(35 patients). 11 cases of early graft nephrectomy were ABO incompatible as compared to just 1 patient with late allograft nephrectomy and the association was significant, p value=0.018. There was significant association between acute antibody mediated rejection and subsequent early graft nephrectomy (p=0.008). Commonest indication in cases of early graft nephrectomy was vascular thrombosis and histopathology showed extensive renal parenchymal necrosis with renal artery or vein thrombosis. In late graft nephrectomy group graft intolerance formed the most common indication. Histopathology showed features of mixed chronic and acute rejection. Interstitial fibrosis/tubular atrophy and arterial fibrous intimal thickening were common in late graft nephrectomy. Malignancy and infection were rare diagnosis on histopathology of graft nephrectomy.

**Conclusions :** This study provides detailed description of the histopathology of early and late graft nephrectomy specimens along with their clinical profile with indications. Graft intolerance is poorly recognised entity with no clear definitions. Histopathology of graft nephrectomy although correspond with clinical findings in majority but may be beneficial in understanding the underlying immune mechanisms in patients experiencing graft intolerance syndrome and managing the transplant recipients in event of unexpected diagnosis like fungal infection and malignancy.