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Clinical Utility Of The International IgA Nephropathy Prediction Tool In Predicting Renal Outcomes Among Patients With IgA Nephropathy Post Kidney Transplant

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Objectives : IgA Nephropathy (IgAN) in post kidney transplant patients was found to be an independent predictor of graft loss, acute rejection and delayed graft function recovery. Meanwhile, the International IgA Nephropathy Prediction Tool (IIgAN-PT) was developed to predict, at the time of native kidney biopsy, worsening kidney function over 5 years among patients diagnosed with IgA Nephropathy. However, this tool has not yet been used in post kidney transplant patients. Hence, this study aims to assess the prognostic yield of this tool in this population.
Methods : This is a single-center retrospective cohort involving kidney transplant recipients with biopsy-proven IgA nephropathy. Using the IIgAN-PT, the risk score was computed using the following variables: age, race, proteinuria, eGFR, blood pressure, MEST score, use of ACEI/ARB and immunosuppression. Predicted renal outcomes at 3 years after initial diagnosis were compared with the actual renal outcomes. Primary outcomes measured were: (1) eGFR decline by 50% and (2) progression to end-stage renal disease (ESRD) with eGFR <15 ml/min.
Results : The IIgAN-PT risk classification was significantly associated with renal decline 3 years after initial diagnosis as high risk patients were 4.6 times more likely to have 50% eGFR decline and progression to ESRD. Interestingly, clinical factors such as use of ACEI/ARBs, proteinuria, eGFR at the time of biopsy and presence of rejection, along with pathologic findings of mesangial hypercellularity and tubular atrophy/interstital fibrosis, emerged as statistically significant risk factors for poorer allograft outcome.
Conclusions : The International IgAN Prediction tool can be used at the time of allograft biopsy to predict the risk of progression to ESRD (eGFR <15 ml/min/1.73m2) and/or >50% decline in the eGFR three years from the histopathologic diagnosis of patients with IgA nephropathy post kidney transplant.