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Glomerular disease

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The Intensity of Mesangial Immunoglobulin A (IgA) Deposits Is Inversely Associated with the Development of Long-term Adverse Outcomes in Adult IgA Nephropathy Patients: A Cohort Study in Korea.

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Background: Immunoglobulin A (IgA)-containing immune complexes have a pivotal role for the pathogenesis of IgA nephropathy (IgAN). However, there are no studies that explored the association between the degree of IgA-containing immune complexes seen in immunofluorescence (IF) staining and clinical outcomes.

Methods: We retrospectively analyzed 340 patients diagnosed with primary IgAN at a tertiary care hospital between 2003 and 2013. The intensity of mesangial IgA deposits were assessed by classic direct IF technique. The primary outcome was composite of creatinine doubling, end-stage renal disease, and all-cause mortality.

Results: During a median 4.8 years` follow-up, the composite outcome occurred in 16.2% of patients. The intensity of mesangial IgA deposits was 1+ in 3.2%, 2+ in 25.3%, and $\geq 3+$ in 71.5% of patients. The intensity of mesangial IgA deposits was inversely associated with the development of the composite outcome (P-trend = 0.004). This was confirmed in multivariate Cox proportional hazard regression (P-trend = 0.018), mostly affected by the association between 1+ vs. $\geq 3+$ [hazard ratio (95% confidence interval), 0.230 (0.068 - 0.775); P = 0.018]. In subgroup analysis by the status of immunosuppressive drug (ISD) use, the inverse association between the intensity of mesangial IgA deposits and the development of the composite outcome was valid only in patients not using an ISD

Conclusion: The risk for the development of the composite outcome decreased as the intensity of mesangial IgA deposits increased. Future studies are needed to confirm our results.

Keywords: None