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Glomerular disease

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Pathologic finding of thin basement membrane is a good prognostic marker in patients with IgA nephropathy

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Background: The prognosis of IgA nephropathy (IgAN) and thin basement membrane disease (TBM) was well known. However, it is unclear whether IgAN with TBM has different clinical course compared to IgAN without TBM. We compared clinical outcomes in IgAN patients with and without TBM.

Methods: Patients who had renal biopsy and were diagnosed as IgA nephropathy were enrolled in the study. Patients with mean follow-up duration less than 3 months and baseline estimated glomerular filtration rate (eGFR) below 15 ml/min/m² were excluded. Clinical end point of eGFR less than 15 ml/min/m² or renal replacement therapy (RRT) were evaluated between IgAN with TBM and without TBM groups.

Results: Among a total of 668 IgAN patients, 94 patients (14.1%) showed TBM and 574 patients (85.9%) had normal thickness of basement membrane. At the time of renal biopsy, IgAN with TBM showed higher percentage of female (62.8 vs 43.0%, $p < 0.001$), higher baseline eGFR (108.9 ± 30.0 vs 98.0 ± 35.9 ml/min/m², $p = 0.006$) and less proteinuria (0.71 ± 0.98 vs 1.22 ± 1.78 g/g, $p = 0.017$) than IgAN without TBM. During the mean followed-up of 66.8 ± 47.3 months, one patients (1.1%) in IgAN with TBM and 31 patients (5.4%) in IgAN without TBM showed disease progression to eGFR below 15 ml/min/m² or received RRT ($p = 0.070$). Kaplan-Meier survival analysis revealed that IgAN with TBM had better renal survival than IgAN without TBM ($p = 0.029$).

Conclusion: IgAN patients with TBM had better baseline characteristics which were associated with better renal survival. This suggest that pathologic finding of TBM is a good prognosis factor in IgAN.

Key words: prognosis, IgA nephropathy, thin basement membrane disease