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Deposition of complement in the vessels of immunoglobulin A nephropathy patients

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Key point

The attentions have been recently directed on the significance of immunostaining findings in IgA nephropathy and few published studies, served mainly the immunostaining in the glomeruli. C3d deposition in the media of renal arterioles may serves as a useful marker for arteriolosclerosis in IgA nephropathy.

Recently much attention has been directed toward the significance of vascular disorders in IgA nephropathy patients. To find the role of C3d deposition in the media of renal arterioles a useful marker for arteriolosclerosis in IgA nephropathy, recently Zhang et al, conducted a retrospective study on 340 patients with IgA nephropathy who performed a renal biopsy. They found, the strongly positive deposition of C3d in arterioles in 36.2% of the biopsies. They also detected a weakly positive deposition of C3d 63.8%. In the weakly positive group, C3d mainly deposited in the intima of arterioles. In the strongly positive group, they observed, the C3d deposition in the intima and the media of arterioles, presenting as the medial thickening and sclerosis of varying severities. During a 2-year follow-up, the prognosis was worse in the C3d strongly positive group than in the weakly positive group. They interpreted that, the predictive value of C3d deposition in the media of arterioles in patients with IgA nephropathy may be a useful marker for arteriolosclerosis indicating unfavorable clinical outcomes (1). To find the role of vascular disease in IgA nephropathy patients, we recently, conducted an investigation on 136 IgA nephropathy patients. We detected a significant association between the scores of arteriolosclerosis and serum creatinine (2). This association for the intensity of intimal fibrosis of interlobular artery was also meaningfully positive. The association of arteriolosclerosis with proteinuria was significantly positive too (2). We interpreted that, the correlation of vasculopathy with serum creatinine and quantity of proteinuria further strengthen the role of vasculopathy in the deteriorating of IgA nephropathy (2-10). In fact, there are very few investigations reported till date on the impact of vasculopathy or its etiology in IgA nephropathy (3-6). It is however clear that, vascular disorders in IgA nephropathy are along with worsening of kidney failure and increased cardiovascular risk (10-15). Though, the pathogenesis of the vascular disorders is still not fully understood, the study by Zhang et al, clearly shows the role of C3d deposits in the worsening of vasculopathy of IgA nephropathy (1). In fact, the attentions have been recently directed on the significance of immunostaining findings in IgA nephropathy (2-5) and few published studies, served mainly the immunostaining in the glomeruli (8-13). Hence, findings of the study conducted by Zhang et al, clarify demonstrates the significance of immunostaining data outside of the glomeruli in IgA nephropathy (1,6-9). However, to better find the significance of these morphologic lesions, it is better to envisage the recent Oxford classification on IgA nephropathy too (12-15) and correlate the findings with four morphologic lesions of this classification.

Author's contribution

HN was the single author of the paper.

Conflicts of interest

The author declared no competing interests.

Ethical considerations

Ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the author.

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