LETTER TO THE EDITOR

IgA Nephropathy and Significance of Immunostaining Data

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TO THE EDITOR

Recently, attentions were directed toward the importance of immunostaining data and its association with various clinical findings and prognosis in patients with IgA nephropathy (IgAN) (1,2). Nevertheless tiniest studies had been directed on this subject. IgAN is the most common glomerulonephritis around the world and is a leading cause of chronic renal failure throughout the world (2-6). As the most widespread primary chronic glomerular disease (2), it is of significant consequence to find augmenting factors that affect the disease progress, monitoring of disease activity and an opportunity to envision disease-specific treatment (7-10). The diagnostic hallmark of IgAN is the preponderance of IgA deposits, with C_3 in the mesangial area of the glomeruli (1-5). IgG or IgM deposits may also be distinguished, however, they are in lower concentration than IgA deposits (2-5). C_1q deposits are regularly absent and their absence is a diagnostic feature for this disease (1,2). In some cases, the mesangial deposits may extend to capillary walls, too (2-6). In fact, the most important questions would firstly be that is there any clinical and prognostic significance in the amount of the deposits and secondly whether mesangial-capillary *versus* pure mesangial deposits has any importance?

Previously, in a study on 265 IgAN patients, Bellure et al. described that location of glomerular IgA and the presence of IgG correlate with mesangial and endocapillary cellularity. This investigation supports the importance of IgG and capillary wall IgA in the development of proliferative changes in IgAN (11). Recently, we conducted a study on 114 biopsies of IgAN patients and we found that only C3 deposits had a significant relationship with serum creatinine. The concentration of IgA, IgM and IgG deposits had no significant association with serum creatinine. Our study also showed that the score of IgA deposition had significant positive relationship with endocapillary proliferation and segmental glomerulosclerosis (12). Additionally, IgM deposition score had positive correlation with segmental glomerulosclerosis.

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In this study, no noteworthy association of IgG deposition score with four morphologic variables of Oxford classification of IgAN was seen.
Besides, there was a significant association of C_3 deposition score with segmental glomerulosclerosis and endocapillary proliferation (12). Recently Maeng et al., directed a retrospective study on 23 patients of IgAN. They observed that, 56.5% were positive for C_4d staining in the glomeruli and 47.8% were positive in the tubular epithelium. They also observed that glomerular C_4d deposition was related with albuminuria and tubular C_4d deposition was correlated with a higher grade of IgAN. They assumed that activation of the complement system was interrelated with renal damage and was recognized through deposition of C_4d in the glomeruli and tubules of IgAN. Positive C_4d staining in the glomeruli and the tubules may be associated with functional injury linked to glomerular filtration and poor kidney outcome (13). Actually, the intensity of deposited IgA, IgG or C_3 has not been validated and qualified to be included as a factor for treatment or follow up study, yet. However, the mentioned above studies revealed that immunostaining findings may be potentially useful in predicting the clinical course, treatment and outcome of IgAN. Moreover, IgAN is considered to be an immune complex-mediated glomerulonephritis (14). The presence of electron-dense deposits may have some value for the assessment of the disease activity. Likewise, the location of deposited immunoglobulins (pure mesangial *versus* mesangial-capillary) may have prognostic implication (10-13). We therefore suggest additional studies on the prognostic significance of deposited antibodies in this disease, especially in different ethnicities (15-16).

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