The Prognosis of IgA Nephropathy —Favorable or Poor?—

Key words: remission, renal survival rate, renal biopsy

IgA nephropathy, which is characterized by mesangial proliferative glomerulonephritis with a predominant mesangial IgA deposition, is the most popular glomerulonephritis accounting for 25 to 50% among primary glomerulonephritides (1, 2). It is difficult to determine whether the prognosis of this common glomerulonephritis is favorable or poor based on previously published papers. The reason of why depends on the heterogeneous progression of IgA nephropathy. Understanding the factors affecting the progression of IgA nephropathy is necessary for the exact resolution of heterogeneous prognosis.

Two kinds of prognoses, favorable or poor, render the clinical course of IgA nephropathy complicated. The prognosis of IgA nephropathy was once considered to be favorable (3). Recent studies suggest that the prognosis of IgA nephropathy is rather poor, reporting that the renal survival rates varied from 50 to 80% in the long-term follow-up, extending to 10 or 30 years (4, 5). On the other hand, clinical remission of IgA nephropathy, that means the disappearance of proteinuria and/or hematuria, is known as evidence of favorable prognosis.

The exact detection of disease onset is very difficult when nephropathy shows an insidious onset and progression. In cross-sectional studies, observation periods from renal biopsy or the beginning of treatment is recorded, while these periods are not true suffering duration of IgA nephropathy (4, 5). The therapeutic trial from early phase may be more effective. Unknown true suffering duration of IgA nephropathy (4, 5). The therapeutic trial from early phase may be more effective. Unknown true suffering duration may obscure the outcome of therapeutic research in IgA nephropathy.

The clinical remission involves both spontaneous and therapeutic remission. Compared with malignant diseases, spontaneous remission, which was actually low ranging from 3 to 7% in previous papers (6, 7), is also noticed in primary IgA nephropathy. The response to treatments with steroid (8, 9), immunosuppressive agents (10), fish-oil (11, 12) and angiotensin II blockers (angiotensin converting enzyme inhibitor and angiotensin receptor antagonist) (13, 14) have been examined in many retrospective and prospective trials. The anti-proteinuric and renoprotective effects of those agents have been indeed controversial, whereas some papers documented that the rates of therapeutic remission responding to any anti-proteinuric agents reached from 10 to 60% (8, 15, 16).

In the clinical investigation of patients with IgA nephropathy, histological and clinical findings must be comprehensively taken into the consideration, because these factors complexly affect the prognosis. In most cases, the grade of histological findings and severity of clinical data show a significant relationship (7). Nevertheless, it is impossible to exclude a lack of eligible glomeruli or sampling error in the renal biopsy. Therefore, some of the patients with IgA nephropathy reveal a discrepancy between histological and clinical findings.

The multiple predictive factors for poor prognosis have been reported both in clinical and histological findings. Hypertension, heavy proteinuria and deteriorated renal function at renal biopsy were ascertained as predictive factors for poor prognosis in long follow-up studies (17, 18). Blood pressure is a marker of systemic condition and does not directly reflect the severity of glomerular disease. This fact indicates that systemic treatment as well as renal treatment may alter the prognostic outcome of patients with IgA nephropathy. In the histological evaluation, total or segmental glomerular sclerosis, crescent formation, adhesion and interstitial fibrosis were confirmed as poor prognostic findings (19, 20). Especially multivariate analysis showed that glomerular sclerosis and interstitial fibrosis were most significantly predictive factors among various histological findings (20).

Recently the association between gene polymorphism and prognosis is focused on as a new predictive factor in IgA nephropathy. Angiotensin-converting enzyme insertion/deletion polymorphism and angiotensinogen gene T235 variant are thought to be related to the treatment responses or impairment of renal function (21-23). However, the results are controversial yet in each single gene polymorphism. It may be necessary to evaluate the interaction between multiple gene polymorphism in this research area.

To resolve the problem of heterogeneous prognosis an investigation of a large number of patients with relevant histological records and long follow-up duration should be undertaken. Additionally, it is important to discuss favorable and poor prognosis in a subjective group. Usui et al (24) reported a clinical investigation for a population of 735 patients with IgA nephropathy having a mean follow-up duration of 6.7 ± 4.1 years (range; 2-21.3 years).

See, also p 697.

In this group 10-year survival and clinical remission rates were 76.4 and 22.6% respectively, which were similar to the rates already reported. In this paper, it was the most attractive point that 3 of 82 patients of a group of minor glomerular abnormalities showed deteriorated renal function and 5 of 197 patients of a group of mild proteinuria revealed the end-point of chronic renal failure or the requirement of hemodialysis treatment. Indeed the percentages of unexpected prognosis were
low, but those percentages cannot be disregarded in daily clinical treatment. The most important point is how do we find these patients with unexpected-prognosis and prevent the decline of renal function of these patients. Usui et al (24) described that increased proteinuria was thought to be one of the signs for deteriorating renal function. We also agree that a useful key for early detection and prevention for unexpected poor prognosis in patients with IgA nephropathy.

We cannot correctly answer the question now, whether the prognostic destiny of IgA nephropathy is determined from the start or not. The goal to alter the poor prognosis is important in the treatment of IgA nephropathy.

Shinichi NISHI, MD, PhD
Blood Purification Center in Niigata University Medical Hospital,
1-754 Asahimachi-Dori, Niigata, Niigata 951-8520

References


