Clinicopathological Features and Prognosis of IgA Nephropathy Patients with Endocapillary Proliferation

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Objective: This study aimed to investigate the clinicopathological features and prognosis of IgA nephropathy (IgAN) patients with endocapillary proliferation.

Methods: This is a single center, retrospective, cohort study. Patients were assigned to two groups according to whether they had endocapillary proliferation (E1 group) or not (E0 group). The clinicopathological features and outcome during follow-up were collected and analyzed. The primary outcome was end stage renal disease (ESRD) (eGFR < 15 ml/min/1.73 m², dialysis, or renal transplantation) or doubling of baseline serum creatinine.

Results: A total of 1570 patients were screened. After excluding 388 patients without endocapillary proliferation data, 1182 patients were enrolled and 431 (36.5%) were assigned to E1 group. Compared to E0 group, patients in E1 group had a smaller proportion of smokers, lower level of hemoglobin and albumin, while they had a higher level of uric acid and 24-hour urinary protein excretion. In addition, E1 group presented with a larger proportion of crescent, arteriolar wall thickness, capillary loops necrosis and segmental sclerosis, and more severe tubular atrophy/interstitial fibrosis. A total of 825 patients were included in the subsequent study with a median follow-up time of 47.5 (34.4, 58.8) months. The Kaplan-Meier curve showed that renal survival rates calculated from the combined events at 3, 5, and 7 years were 91%, 83%, 83% in E1 group. Endocapillary proliferation was not an independent risk factor for renal outcome (OR = 1.47, 95% CI 0.89–2.43, P = 0.136). Younger age, glomerulosclerosis, segmental sclerosis, larger crescent proportion and interstitial inflammatory infiltration were independent risk factors for renal outcome in patients with endocapillary proliferation.

Conclusion: IgAN patients with endocapillary proliferation presented with worse clinicopathological features. No significant association was found between endocapillary proliferation and renal outcome.

http://dx.doi.org/10.1016/j.hkjn.2015.08.101
hours, daytime and nighttime systolic and diastolic BP variations were calculated. The patients were divided into four groups based on different circadian BP rhythm: dippers, non-dippers, reversed dippers, and extreme dippers. Demographic and clinicopathologic data were collected and analyzed. Logistic regression models were used to analyze the associated factors for abnormal BP rhythms among the patients with IgAN.

**Results:** A total of 375 IgAN patients were recruited and the mean age was (36.5 ± 11.7) years with 51.7% (194/375) men. The prevalence of abnormal circadian BP was high to 84% (315/375), with 82.4% in normotensive and 86.1% in hypertensive patients (P < 0.05). The non-dipper rhythm was the most common abnormal pattern (63.8%, 249/375), and then was reversed dipper (27.3%, 86/375), extreme dipper (8.9%, 32/375). Compared to the patients with normal BP rhythm, the patients with abnormal BP rhythms had higher left ventricular mass index, higher serum creatinine and uric acid but lower eGFR, higher proportion of arteriole wall thickening and small vascular hyalinosis, which was the most distinguishing in those with reversed dipper BP. Multivariate logistic regression analysis revealed that the eGFR (OR: 0.64, 95% CI: 0.45–0.93, P = 0.037), serum uric acid (OR: 1.60, 95% CI: 1.01–2.54, P = 0.014) and small vascular hyalinosis (OR: 2.17, 95% CI: 1.14–4.11, P = 0.044) were independently associated with abnormal BP circadian rhythm.

**Conclusion:** Abnormal circadian BP rhythm was common in IgAN patients independent of hypertension. The associated factors for abnormal BP rhythm among IgAN patients were the eGFR, serum uric acid, and small vascular hyalinosis.

http://dx.doi.org/10.1016/j.hkjn.2015.08.102

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**0153**

Renal Pathology in Two Chinese Patients with Concomitant IgG4-Related Disease (IgG4-RD) and IgA Nephropathy (IgAN)

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**Background:** IgG4-RD is known to involve the kidneys. We report two patients with IgG4-RD and concomitant renal pathology.

**Cases:** A 61-year-old male presented with microscopic haematuria, renal impairment [serum creatinine (SCr) 160 umol/mL], proteinuria and anaemia. Renal biopsy revealed generalised lymphadenopathy and splenomegaly. Five years later, his renal function deteriorated (SCr 326 umol/mL). Cervical lymph node biopsy revealed chronic sclerosing sialadenitis. Renal biopsy showed IgAN with minimal change-like lesion. There was no tubulointerstitial nephritis and staining for IgG was negative. His serum IgG4 level was elevated. His nephrotic syndrome, lymphadenopathy and lung mass all responded to prednisolone therapy. Computed tomography scan of the thorax showed right lung mass with a 62-year-old male who presented with lung mass and nephrotic syndrome. Computerized tomography scan of the thorax showed right lung mass with lymphadenopathies. Submandibular mass biopsy showed IgG4-related chronic sclerosing sialadenitis. Renal biopsy showed IgAN with minimal change-like lesion. There was no tubulointerstitial nephritis and staining for IgG4 was negative. His serum IgG4 level was elevated. His nephrotic syndrome, lymphadenopathy and lung mass all responded to prednisolone therapy. However, nephrotic syndrome relapsed 1 month after stopping steroid and was steroid dependent.

Conclusion: We reported two patients with IgG4-RD and renal pathology of IgAN. One patient had IgG4-related kidney disease (IgG4-RKD) confirmed on renal biopsy. Whilst classical renal histopathology of IgG4-RKD is tubulointerstitial nephritis, the two cases showed histological features of IgAN. Both patients are steroid dependent. IgAN is a common glomerulonephritis in the oriental population. The presence of both IgAN and IgG4-RD in these patients could be coincidental. Further studies are needed to assess whether there is an association between the two conditions.

http://dx.doi.org/10.1016/j.hkjn.2015.08.103

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**0173**

Long-term Renal Survival in Male and Female Patients with IgA Nephropathy and Related Associated Factors

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**Objective:** This study aimed to assess the long-term renal survival rate and related associated factors of renal progression in IgAN with different sexes.

**Methods:** This is a single center, retrospective, cohort study. All enrolled patients were divided into two groups by sex. Clinical and pathological information were collected and analyzed. The clinical outcomes and associated factors were evaluated by Kaplan-Meier Estimation and Cox regression.

**Results:** A total of 988 eligible IgAN patients (M/F 1:1.4) were enrolled. Compared to females, males with IgAN exhibited worse renal function, greater proteinuria, and more frequent occurrence of hypertension, hypertriglyceridaemia and hyperuricemia. Besides, males had more severe segmental sclerosis and tubular-atrophy/interstitial fibrosis. For females, hematuria was more frequent. The 3-, 5- and 7-year cumulative renal survival rates were 92.9%, 84.3%, 73.1% in males; 95.6%, 89.4%, 75.8% in females, respectively. But no significant difference was noted in the cumulative renal survival rate between sexes (log-rank test P = 0.090). Multivariate Cox regression analyses revealed that sex difference was not risk factor for renal outcomes after matching baseline eGFR and SUA. In males, lower eGFR (HR: 0.67, P < 0.001) and degree of glomerular sclerosis (HR: 1.02, P = 0.038) were risk factors for renal outcome. Whereas in females, prognosis factors of renal survival included not only eGFR (HR: 0.81, P < 0.001) and glomerular sclerosis (HR: 1.03, P = 0.001) but also proteinuria (HR: 1.37, P = 0.002), age (HR: 0.61, P = 0.008) and segmental sclerosis (HR: 1.03, P = 0.035).

**Conclusion:** This study found that males with IgAN presented worse clinicopathological changes than females, but no significant difference was seen in long-term renal survival between the sexes. Lower eGFR and glomerular sclerosis were risk factors for renal outcome in both sexes. Higher proteinuria, younger age and degree of segmental sclerosis were associated with a worse renal outcome in women but not in men.

http://dx.doi.org/10.1016/j.hkjn.2015.08.104

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**0186**

Effects of Combined Therapy with Mycophenolate Mofetil and Glucocorticoids in IgA Nephropathy

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**Objective:** To investigate the treatment response and long-term effects of combination therapy with mycophenolate mofetil (MMF) and glucocorticoids compared to glucocorticoids alone in IgA nephropathy (IgAN).

**Methods:** Two hundred and seven IgAN patients with persistent proteinuria (> 1 g/day), estimated glomerular filtration (eGFR) > 30 ml/min/1.73 m² were enrolled. 126 patients received methyl-prednisolone only (MP group). 81 patients received MMF and methyl-prednisolone (combination group). The median follow-up time was 41 months (12–101). The primary endpoint was defined as double of serum creatinine or progress to end stage renal disease (ESRD). A decrease in the baseline eGFR of 25% was defined as renal survival.

**Results:** The urinary proteinuria declined significantly from 2.48 ± 2.6 g/day to 0.69 ± 0.73 g/day (P < 0.05) in combination group and from 2.85 ± 2.6 g/day to 0.82 ± 1.16 g/day in the MP group (P < 0.05). The