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고립성 현미경적 혈뇨에 대하여 조직 검사 후 10년 추적관찰-단일 기관 연구

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10-year Follow-up after Biopsy Done for Isolated Microscopic Hematuria - A Single Center Study

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Background/Aims: Risks for Isolated microscopic hematuria (IMH) progressing to ESRD are low and slow. This fact leads to the necessity of whether or not to perform a renal biopsy. There are few data of a long-term follow-up in IMH patients. In our study, we reviewed a 10 year data of isolated microscopic hematuria patients as to evaluate the prognosis of the disease.

Methods: A retrospective analysis of IMH patients, biopsy done between February 2002 and January 2011, were done. Among 479 consecutive patients, 449 were enrolled and reviewed for their baseline characteristics, pathology and renal complications along the follow-ups. We defined renal complications as those whom developed with proteinuria, hypertension or an estimated glomerular filtration rate (eGFR) <60 ml/min/1.73m^2. Pathologic review was focused on the presence of chronic changes (glomerulosclerosis, interstitial fibrosis or tubular atrophy).

Results: The duration of post-biopsy follow up of 449 subjects were around 84 (range 50-155) months. During the period, 12 subjects (66% IgA nephropathy, 8.25% each of arterioglomerulosclerosis, focal segmental glomerulosclerosis, membranoproliferative disease, and mesangial proliferative glomerulonephritis) developed one or more complications. 2 subjects progressed to CKD (GFR <60 ml/min). Significant proteinuria (protein to creatinine ratio >0.3 g/mg) was found in 6 patients including one whom developed CKD. Also, Hypertension was newly diagnosed in 5 subjects. Among the 12 subjects with renal complications 75% had chronic pathologic changes (Glomerulosclerosis, scars, tubular atrophy, or interstitial fibrosis). Relative risk of chronic pathologic changes in IMH patient was 3.38 (95% CI, 0.93-13.07, p=0.75).

Conclusion: The incidence of IMH patients developing renal complications such as proteinuria, hypertension, and CKD are very low (2.6%) in our 10 year observational study. 75% of the patients with renal complication had chronic pathologic changes (glomerulosclerosis, interstitial fibrosis, and tubular atrophy) but it was not statistically significant. In our study, we suggest that IMH has an overall benign nature in a 10 year follow-up.

Key Words: 고립성 현미경적 혈뇨, 조직검사, 10년
Microscopic hematuria, Biopsy, 10 year