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The Impact of military enlistment on the Prognosis of young patients with IgA nephropathy

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Objectives : IgA nephropathy is one of the most common primary glomerular diseases. Factors such as decreased renal function, persistent proteinuria, and older age predict a poor prognosis in IgA nephropathy. In South Korea, there is a unique situation for young men, which is military enlistment (ME). Urinalysis is included in the basic examination before ME, and if there is hematuria or proteinuria, a detailed examination is required. IgA nephropathy is often incidentally diagnosed through this test. We aimed to investigate how ME influences the prognosis of patients with IgA nephropathy.

Methods : We retrospectively analyzed a total of 269 patients diagnosed with IgA nephropathy between 2009 and 2016 at Gyeongsang National University Hospital. The patients were divided into three groups, non-ME group with aged 18-25 years (n=15), ME group with aged 18-25 years (n=26), and others (n=228). Renal progression was defined as a 50% decline of eGFR or the initiation of renal replacement therapy or kidney transplant.

Results : The mean eGFR at the time of kidney biopsy in the ME group was significantly higher compared to the other groups ($P<0.001$). Conversely, the mean urine protein to creatinine ratio was significantly lower than that of the other groups ($P=0.001$). In the classification based on the MEST-C scoring system, the scores for segmental glomerulosclerosis and tubular atrophy/interstitial fibrosis were higher in the group of patients over 25 years, while other scores did not show differences among the three groups. In the Cox regression analysis of the risk factors for renal progression, the hazard ratio for military enlistment was 7.245 ($P=0.004$).

Conclusions : ME group showed lower mean age and proteinuria, and higher mean eGFR at the time of kidney biopsy than other groups. However, military enlistment was found to significantly increase the risk of renal progression. Further research with a larger population is needed.