

## 일반인구집단에서 사구체 과여과와 사망률과의 관계

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### Glomerular Hyperfiltration and Mortality in General Population

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**Background:** Glomerular hyperfiltration has been known to be a marker of early damage of kidney disease. However, the association of glomerular hyperfiltration and individual's long term prognosis remains unknown.

**Methods:** Clinical and biochemical data had been collected in 109,795 routine health checkups from 1995 to 2009. We extracted the mortality data from Statistics Korea to our data using personal unique identifier. Hyperfiltration was defined as an estimated glomerular filtration rate (eGFR) over 95th percentile by age and sex-matched. Hypofiltration was defined as an eGFR below the 5th percentile by age and sex matched.

**Results:** A total of 109,795 individuals was included, and 53.5% of them were men. Among of them, 7.4% of participants had diabetes, and 24.8% had hypertension. The mean age was 53.5 years in hyperfiltration group, 55.9 years in hypofiltration group, and 54.3 years in normofiltration group. During the 58.9 months of follow up, 1,840 (1.3%) participants were dead. Interestingly, the mortality rate of hyperfiltration group was higher than normofiltration group in both men (5.3% vs 3.1%,  $p < 0.001$ ) and women (1.4% vs 1.7%,  $p = 0.036$ ). In the survival analysis, hyperfiltration compared with normofiltration was proved to be an independent risk factor for all-cause mortality after adjustment for by age, diabetes, hypertension, body mass index, lipid profile, C-reactive protein, and serum albumin in men (hazard ratio 1.206, 95% CI 1.018-1.429,  $P = 0.030$ ). In contrast, hyperfiltration failed to predict mortality in women.

**Conclusions:** In this study, we disclose that glomerular hyperfiltration might be an independent risk factor for all-cause mortality, especially in men. The mechanism and clinical implication of glomerular hyperfiltration should be more clarified.

**Key Words:** 사구체과여과율, 사망률, 사구체과여과

GFR, Mortality, Glomerular hyperfiltration