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IL-18, TGF-β 및 VEGF 유전자 다형성이 IgA 신병증 및 얇은 사구체기저막병의 발생에 미치는 영향

경북대학교 의학전문대학원 내과학교실

윤세희 · 최지영 · 정희연 · 조장희 · 홍경득 · 권오언 · 진미경 · 박선희 · 김용림 · 김찬덕

The Impact of Gene Polymorphisms of Interleukin-18 (IL-18), Transforming Growth Factor-β (TGF-β) and Vascular Endothelial Growth Factor (VEGF) on Development of IgA Nephropathy or Thin Glomerular Basement Membrane Disease

Se-Hee Yoon, Ji-Young Choi, Hee-Yeon Jung, Jang-Hee Cho , Kyung-Deuk Hong
Owen Kwon, Mi-Kyung Jin, Sun-Hee Park, Yong-Lim Kim, Chan-Duck Kim

Department of Internal Medicine, Kyungpook National University, School of Medicine, Daegu, Korea

Purpose: We investigated the effects of gene polymorphisms on the development of IgA nephropathy and thin glomerular basement membrane (GBM) disease by analyzing polymorphisms in the interleukin (IL)-18, transforming growth factor (TGF)-β, and vascular endothelial growth factor (VEGF) genes in Korean patients.

Methods: The study included 146 normal subjects and biopsy-proven 69 IgA nephropathy and 44 thin GBM disease patients. The gene polymorphisms A-607C and G-137C in IL18, C-509T and T869C in TGFB1, and C-2578A and C405G in VEGF were investigated in DNA extracted from peripheral blood.

Results: The frequencies of the IL18 -607CC genotype (p=0.002) and the VEGF 405GG genotype (p=0.020) were significantly increased in the IgA nephropathy group. Significant differences were observed between the thin GBM disease and control groups in the genotype of C405G VEGF (p=0.017). There were no differences in genotype distribution between IgA nephropathy and thin GBM disease groups.

Conclusion: Significant differences of genotype frequency were observed between IgA nephropathy, thin GBM disease and control group. However, the study has a limit to differentiate IgA nephropathy and thin GBM disease. To clarify our results, further study including more subjects is needed

Key Words: 유전자 다형성, IgA 신병증, 얇은 사구체기저막병
IL-18, TGF-β1, IgA nephropathy