

한국인 혈액투석 환자에서 interleukin 6 -634 C/G 및 -174 G/C 유전자다형성

이화여자대학교 부속 목동병원 신장내과

류정화, 김승정, 유민아, 류동열, 최규복

Interleukin (IL)-6 -634 C/G and -174 G/C Polymorphisms in Korean Hemodialysis Patients: Study About Association between IL-6 Genotypes and Vascular Access Dysfunction

Jung Hwa Ryu, Seung-Jung Kim, Mina Yu, Dong-Ryeol Ryu, Kyu-Bok Choi

Division of Nephrology, Department of Internal Medicine, Ewha Womans University School of Medicine

Background/Purpose: Vascular access dysfunction is a common complication in hemodialysis (HD) patients and is closely related with vascular inflammation. Chronic inflammatory status has been known to be possible risk factor of cardiovascular diseases in HD patients, but there is discrepancy in individual susceptibility. IL-6 is well-known inflammatory cytokine and has various polymorphisms. Our study aimed to investigate whether IL-6 polymorphism associates with vascular access failure in HD patients.

Methods: Eighty HD patients were enrolled for this study. We examined polymorphisms in IL-6 gene promoter of -634C/G and -174G/C by RFLP-PCR for each patient. We compared vascular access patency according to IL-6 polymorphism in patients group. Eighty nine healthy people were enrolled as control group. We also measured plasma IL-6 levels by ELISA.

Results: In IL-6 -634 polymorphism, GG genotype and G allele were more frequent in HD patients group than in control group. Furthermore, higher frequency of G allele was noted in the shorter access survival group compared to the longer survival group in non-diabetic patients. Correlation between IL-6 -634 C/G polymorphism and plasma levels of IL-6 was not shown in this study. The C allele of IL-6 -174G/C polymorphism was not found in our study population.

Conclusion: IL-6 -634 G allele is a possible risk factor in end stage renal disease and may be associated with vascular access dysfunction in HD patients. But, plasma levels of IL-6 are not determined by only either IL-6 -634C/G or -174G/C polymorphism in Korean HD patients. IL-6 -174G/C polymorphism is very rare in Korean people. Further prospective studies for larger population are required.

Key Words: 혈액투석, 투석접근로 기능부전, IL-6유전자다형성

Interleukin-6 polymorphism, Hemodialysis, Access dysfunction