

혈액투석을 시작하는 말기 신부전 환자에 있어서 혈중 지질농도와 임상적 예후

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The Impact of Lipid Profiles on the Clinical Outcome in Incident Hemodialysis Patients

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Background: Cardiovascular (CV) disease is the main cause of death in patients with end-stage renal disease (ESRD). Even though hyperlipidemia is a well-established risk factor for CV mortality in the general population, the association between abnormal lipid levels and CV mortality in ESRD patients remains unclear. The aim of this study was to elucidate the impact of dyslipidemia on the clinical outcome in incident hemodialysis (HD) patients.

Methods: A prospective cohort of 867 incident HD patients from 36 centers of the Clinical Research Center for ESRD in Korea was selected for this study, and the relationship of various lipid levels with a composite of all-cause mortality and CV events (primary outcome) was clarified. Patients were stratified into tertile groups based on the baseline serum total, LDL-, and HDL-cholesterol, and triglyceride concentrations as follows: total cholesterol (C), <137, 137-171, >171 mg/dL; LDL-C, <72, 72-99, >100 mg/dL; HDL-C, <34, 34-44 and >44 mg/dL, and triglyceride, <89, 89-136, >136 mg/dL, and the primary endpoint was compared among the groups of each lipid category.

Results: The mean levels of serum total, LDL-, and HDL-C, and triglyceride were 157.8±47.7, 89.8±38.1, 40.5±13.4, and 125.4±71.1 mg/dL, respectively. During a mean follow-up duration of 20.4 months, 49 patients (5.7%) died and 73 CV events (8.4%) occurred. In each tertile of total C concentrations, 33 (11.3%), 40 (14.1%), and 36 patients (12.3%), respectively, reached the composite outcome (p=0.730). The proportion of patients who met the primary outcome was lower in the second tertile of LDL-C levels compared to the first and third tertile groups, but the difference did not reach statistical significance (p=0.079). In addition, there were no differences in the hazard ratios for the primary endpoint among the tertiles of triglyceride (p=0.747) and HDL-C concentrations (p=0.115). After adjustment for demographic and clinical characteristics, and parameters related to inflammation and malnutrition, the risks for reaching the composite outcome were still comparable among the tertile groups of each lipid profile. Moreover, even when lipid levels were treated as continuous variables, the results remained unaltered.

Conclusions: Serum lipid concentrations at the commencement of dialysis are not associated with short-term all-cause mortality and CV events in incident HD patients. However, further long-term studies are needed to verify these findings.

Key Words: 혈중 지질농도, 임상적 예후, 혈액투석
Lipid profile, Clinical outcome, Hemodialysis