Effects of Ezetimibe on Lipid Profiles and Hemostatic Markers in End-Stage Renal Disease

W. Kim, S.B. Kim
Division of Nephrology, Department of Internal Medicine, Asan Medical Center, South Korea

Background/Aims: Dyslipidemia is one of the major causes of cardiovascular disease in end-stage renal disease (ESRD) patients. Most of them are dyslipidemic despite the use of lipid-lowering agents. Ezetimibe is a novel chemical entity that inhibits the intestinal absorption of dietary and biliary cholesterol. This study evaluated the effects of ezetimibe on the lipid profile, inflammation markers, endothelial injury, and thrombogenesis in ESRD patients.

Methods: Sixty-five patients with serum low-density lipoprotein (LDL)-cholesterol levels ≥100 mg/dl were recruited: 33 patients were on hemodialysis and 32 patients were on peritoneal dialysis. They were assigned randomly to the ezetimibe (10 mg) monotherapy group and the ezetimibe (10 mg) plus simvastatin (10 mg) combination therapy group. Both drugs were administered for 8 weeks. Results: There were no significant differences in the baseline demographic and laboratory characteristics between the two groups. In the monotherapy group, the total and LDL-cholesterol levels were reduced by 14.7 and 21.9%, respectively. There were no changes in the high-density lipoprotein (HDL)-cholesterol or triglyceride levels. Fibrinogen increased significantly (p=0.04). In the combination therapy group, the total and LDL-cholesterol levels were reduced by 29.8 and 42.4%, respectively. There was an additional 15.1% reduction in total cholesterol and an additional 20.5% reduction in LDL cholesterol compared with monotherapy. Several patients complained of minor adverse effects and only one patient in the ezetimibe monotherapy group discontinued medication, because of diarrhea. Conclusions: In ESRD patients, ezetimibe used as combination therapy with a statin is more effective than ezetimibe monotherapy in ESRD patients.