S-D36

투석환자에서 adiponectin 수치 및 leptin 수치와 지질성분의 연관성

동아대학교 의과대학 내과학교실[1], 동아대학교 의과대학 생리학교실[2]
한양대학교 생활과학대학 식품영양학과[3], 코끼리 내과의원[4]

남현경[1] · 안원석[1] · 김성은[1] · 김기현[1] · 배혜란[2] · 박용순[3] · 김 구[4] · 배성진[4]

Association between Adiponectin Levels, Leptin Levels and Lipid Profile in Dialysis Patients

Hyun Kyung Nam[1], Won Suk An[1], Seong Eun Kim[1], Ki Hyun Kim[1]
Hae Rahn Bae[2], Yongsoon Park[3], Gu Kim[4], Sung Jln Bae[4]

Department of[1] Internal Medicine College of Medicine Dong-A University
Department of[2] Physiology College of Medicine Dong-A University
Department of[3] Food and Nutrition College of Human Ecology Hanyang University, Koggiri[4] Dialysis Center

Background : Leptin and adiponectin, well-recognized adipocytokines, are assumed to be associated with malnutrition, inflammation and atherosclerosis. Adiponectin have protective role against atherosclerosis and dialysis patients have an atherogenic serum lipid profile. The aim of this study was to elucidate association between adipocytokines and lipid in hemodialysis (HD) and peritoneal dialysis (PD) patients.

Methods : Forty-four HD patients (age: 58.9±12.7 years, duration of HD: 99.7±50.4 months) and twenty-nine PD patients (age: 55.0±12.2 years, duration of PD: 30.7±20.0 months) were enrolled in this study. We analysed leptin, adiponectin, serum lipids, body mass index (BMI) and hsCRP. Serum leptin and adiponectin were measured by enzyme linked immunosorbent assay and red blood cell (RBC) fatty acids was measured using gas chromatography (29 patients).

Results : No significant difference was shown comparing adiponectin levels of PD and HD patients but leptin levels ($p=0.008$) and BMI ($p=0.012$) were significantly higher in PD patients. Leptin levels were significantly higher in female patients compared to male patients (male/female=44/29, $p<0.001$). Negative associations were shown between adiponectin and BMI ($p=0.007$), triglyceride ($p=0.036$), hsCRP ($p=0.024$), creatinine ($p=0.003$) and arachidonic acid/ eicosapentaenoic acid (EPA) ($p=0.041$) and positive association was shown for high-density lipoprotein (HDL) level ($p=0.007$). Positive associations were shown between adiponectin and omega-3 fatty acid ($p=0.023$), EPA ($p=0.015$) and Kt/V ($p=0.018$) and negative association was shown omega-6 fatty acid ($p=0.010$) in HD patients. Positive associations were shown between leptin and BMI ($p=0.004$), total cholesterol ($p=0.003$), low-density lipoprotein level ($p=0.004$).

Conclusion : Adiponectin is related with HDL and EPA which have cardiprotective role and leptin is related with atherogenic lipid profile. Decreasing leptin levels or increasing adiponectin levels will be needed for delaying progression of atherosclerosis especially in female PD patients with high BMI.