

## 비만하지 않은 복막투석 환자에서 adiponectin 수치와 인슐린 저항성 사이의 상관관계

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### Low Circulating Adiponectin Levels are Associated with Insulin Resistance in Non-Obese Peritoneal Dialysis Patients

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**Background:** In patients with end-stage renal disease (ESRD), circulating adipokine levels are increased due to decreased renal clearance, irrespective of obesity. However, whether adipokines play a role in the development of insulin resistance (IR) in non-obese ESRD patients is unknown.

**Method:** We conducted a cross-sectional study to identify factors associated with IR in 62 non-obese patients on peritoneal dialysis (PD). Non-obesity was defined as body mass index (BMI)  $<25 \text{ kg/m}^2$ . IR was determined using homeostatic model assessment-IR (HOMA-IR). We also measured serum concentrations of adiponectin, leptin, resistin, high-sensitivity C-reactive protein (hsCRP), and IL-6.

**Result:** The average BMI of the study patients was  $21.6 \text{ kg/m}^2$ . When patients were divided into two groups according to the median value of HOMA-IR, serum adiponectin levels were significantly lower in patients with HOMA-IR  $>1.85$  than in those with HOMA-IR  $\leq 1.85$ , whereas serum concentrations of leptin and resistin did not differ between the two groups. In addition, log-transformed HOMA-IR was negatively correlated with adiponectin ( $\gamma = -0.464$ ,  $p < 0.001$ ) and log-transformed high-density lipoprotein cholesterol ( $\gamma = -0.250$ ,  $p = 0.050$ ) and positively correlated with age ( $\gamma = 0.334$ ,  $p = 0.008$ ) and triglyceride ( $\gamma = 0.392$ ,  $p = 0.002$ ). However, resistin, log-transformed leptin and log-transformed hsCRP were not associated with HOMA-IR. In a multiple linear regression model, adiponectin was independently associated with HOMA-IR ( $\beta = -0.023$ ,  $p = 0.015$ ).

**Conclusion:** In conclusion, this study suggests that low circulating adiponectin levels might be involved in IR even in non-obese patients undergoing PD.

**Key Words:** Adiponectin, 인슐린 저항성, 복막투석  
Adiponectin, Insulin Resistance, Peritoneal Dialysis