

혈액투석환자에서 체액상태와 아디포카인과의 연관성 연구

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Adipokines and Volume Status in Hemodialysis Patients: A Preliminary Data

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Background: Adipokines are related to cardiovascular outcome in hemodialysis (HD) patients. Both fluid overload and dehydration are also linked to an increased cardiovascular morbidity in HD patients. However, the association between adipokines and volume status has not been investigated yet.

Methods: We enrolled 120 patients who received more than 3-month hemodialysis in major 3 dialysis centers. According to the amount of fluid overload, which was provided by the body composition monitor (BCM, Fresenius Medical Care Korea), we divided into 3 groups: overhydrated group (fluid overload ≥ 1.1 L), normohydrated group ($-1.1 \text{ L} \leq \text{fluid overload} < 1.1 \text{ L}$), and dehydrated group (fluid overload $< -1.1 \text{ L}$). We also measured the adipokines (leptin, adiponectin, and resistin) and inflammation (interleukin-6, and monocyte chemotactic protein-1).

Results: The proportion of the overhydrated group was 36.9% (45/120), and that of the dehydrated group was 18% (22/120). Serum levels of leptin in the dehydrated group was higher, compared to the other groups ($p=0.001$). Serum levels of adiponectin, resistin, interleukin-6, and monocyte chemotactic protein-1 were not different among the three groups. Serum leptin levels were negatively correlated with the absolute amount of fluid overload, controlled for age, gender, and fat contents (coefficient $\beta = -0.427$, $p=0.007$).

Conclusion: We found that leptin levels may be strongly associated with volume overload in HD patients. Further prospective interventional trials could be needed to evaluate serial changes of leptin with volume status in HD patients.

Key Words: 혈액투석, 체액량, 체성분분석, 아디포카인

Hemodialysis, Volume status, Body composition, Adipokine