

## 만성 혈액 투석 환자들의 영양 상태와 혈중 베타2 마이크로글로불린의 농도와의 관계

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### Nutritional Status is an Independent Associate of Serum $\beta$ 2-microglobulin Level in Chronic Hemodialysis Patients

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**Background/Aims:**  $\beta$ 2-microglobulin ( $\beta$ 2-M) has been considered a surrogate marker of putative middle-molecule uremic toxins, which are difficult to dialyze using low-flux membranes. This cross-sectional study evaluated the correlation of serum  $\beta$ 2-M to nutritional parameters in chronic hemodialysis (CHD) patients.

**Methods:** Laboratory parameters, including  $\beta$ 2-M, albumin, prealbumin, creatinine, blood urea nitrogen (BUN), high-sensitivity C-reactive protein (hs-CRP), lipid battery, KT/V, and normalized protein nitrogen appearance (nPNA), were measured in 201 CHD patients. Clinical data such as age, sex, duration of hemodialysis, and presence of cardiovascular disease and diabetes mellitus, were also recorded.

**Results:** The mean serum  $\beta$ 2-M concentration was  $37.1 \pm 14.4$  ug/mL. On univariate analysis,  $\beta$ 2-M was positively correlated with nPNA, duration of hemodialysis, BMI, concentrations of creatinine, albumin, BUN, and hs-CRP, and negatively correlated with HDL-C concentration. On multiple regression analysis, nPNA ( $p < 0.001$ ), duration of hemodialysis ( $p < 0.001$ ), creatinine concentration ( $p < 0.001$ ), albumin concentration ( $p = 0.006$ ), BUN concentration ( $p = 0.011$ ) and HDL-C concentration ( $p = 0.038$ ) were independent associates of serum  $\beta$ 2-M concentration.

**Conclusion:** Our results show that nutritional status is an independent associate of serum  $\beta$ 2-M concentration in CHD patients.

**Key Words:** 혈액투석, 베타2 마이크로글로불린, 영양

Hemodialysis,  $\beta$ 2-microglobulin, Nutrition