

## 혈액투석환자와 복막투석환자에서 노인영양위험지표와 림프구아수의 관계

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### Relationship between Onodera's Prognostic Nutritional Index and Subpopulation Lymphocyte Counts in Hemodialysis and Peritoneal Dialysis Patients

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**Background:** No standard method for assessing the nutritional status in dialysis patients. In the present study, we undertook an evaluation to determine whether estimation of geriatric nutritional risk index (GNRI) and lymphocyte subset counts can be helpful in diagnosis of malnutrition in hemodialysis (HD) and continuous ambulatory peritoneal dialysis (CAPD) patients.

**Methods:** We examined the GNRI and lymphocyte subset counts of 50 HD patients (55.8±12.7 years; 28 men and 22 women) and 16 CAPD patients (49.8±14.5 years; 10 men and 6 women). The GNRI is calculated based on the serum albumin level and total lymphocyte count and uses the following equation: GNRI=[14.89×albumin (g/dL)]+[41.7×(weight/ideal body weight)]. Logistic regression analysis was performed for predicting malnutrition in dialysis patients.

**Results:** The average GNRI value was 100.1±8.4 in HD patients and 99.2±8.1, and GNRI values were normally distributed. Lymphocyte subset counts were not different between HD patients and CAPD patients. Lymphocyte subset counts were lower in patients with higher GNRI (GNRI ≥100). According to logistic regression for predicting malnutrition according to GNRI, age, female and CD 19 count predicted malnutrition in hemodialysis and peritoneal dialysis patients

**Conclusions:** These results suggest that GNRI and lymphocyte subset counts (especially CD 19 count) may be a significant nutritional marker in HD and CAPD patients.

**Key Words:** 노인영양위험지표, 림프구아수, 투석

GNRI, Subpopulation lymphocyte counts, Dialysis

Table 3. Logistic regression for predicting malnutrition according to GNRI at start of the study

Variable	OR (95% CI)	P
Age > 60 years	10.783 (1.936-60.059)	0.007
Female	6.643 (1.269-34.788)	0.025
PD	3.159 (0.338-29.533)	0.313
Duration of dialysis (months) > 60	0.705 (0.136-3.657)	0.677
DM	1.507 (0.342-6.633)	0.588
Total Lymphocyte Count (/mm <sup>3</sup> ) < 1500	0.473 (0.113-1.972)	0.304
CD3 count (/mm <sup>3</sup> ) < 1000	0.598 (0.040-8.996)	0.711
CD4 count (/mm <sup>3</sup> ) < 600	0.969 (0.176-5.329)	0.971
CD8 count (/mm <sup>3</sup> ) < 350	3.509 (0.331-37.193)	0.297
CD19 count (/mm <sup>3</sup> ) < 100	9.202 (1.481-57.191)	0.017