

## 투석 시작 후 주관적 영양상태 평가 점수의 변화가 말기 신질환 환자에서 사망률에 미치는 영향

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### Changes in Subjective Global Assessment is an Independent Predictor of All-Cause Mortality in Incident Dialysis Patients

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**Background:** Subjective global assessment (SGA) is an established tool to assess nutritional status and closely associated with mortality in end-stage renal disease (ESRD). However, little is known whether improvement or deterioration of nutritional status after dialysis initiation affects clinical outcome. This study was aimed to elucidate the association between the changes of SGA after dialysis initiation and mortality in ESRD.

**Methods:** A prospective cohort recruited from the Clinical Research Center for ESRD was used. SGA score was measured by trained investigators at the time of dialysis initiation and after 12 months. Nutritional status was defined as well-nourished (SGA 6-7, subgroup A), mildly to moderately malnourished (SGA 3-5, subgroup B), or severely malnourished (SGA 1-2, subgroup C). The patients who were severely malnourished at baseline (n=2) or 12 month (n=1) were excluded because of small sample size. The patients were divided into four groups according to the change of nutritional status; group 1, SGA subgroup A to A; group 2, SGA subgroup B to A; group 3, SGA subgroup A to B; group 4, SGA B to B. Cox proportional hazard analysis was performed to find the predicting factors for mortality.

**Results:** Among 924 patients, the number of the patients was 610 in group 1, 213 in group 2, 50 in group 3, and 51 in group 4. During a median follow-up duration of 30 months, 109 patients died. Kaplan-Meier plots showed that cumulative survival rate of group 1 was the highest, and that of group 4 was the lowest (group 1, 91.1%; group 2, 87.3%; group 3, 74.0%; group 4, 70.6%; log-rank test, p<0.001). Worsening nutritional status after 12 months is a significant risk factor for all-cause mortality (group 1 vs. 3, p<0.001; group 2 vs. 4, p<0.001), while baseline nutritional status at dialysis initiation did not reach statistical significance (group 1 vs. 2, p=0.063; group 3 vs. 4, p=0.107). Moreover, multivariate Cox proportional hazard analysis showed that group 3 and 4 were significantly associated with all-cause mortality (group 1 as reference; group 3, HR=4.265, 95% CI=2.259-8.053 p<0.001; group 4, HR=3.350, 95% CI=1.814-6.185, p<0.001).

**Conclusion:** Improvement of nutritional status after dialysis initiation could be beneficial for patient outcomes regardless of baseline status, suggesting that intervention to improve nutritional status after dialysis initiation might be a strategy to reduce mortality in ESRD patients.

**Key Words:** 주관적 영양상태평가, 말기신질환, 사망률

Subjective global assessment, End-stage renal disease, Mortality