

혈액투석을 받는 말기신질환 환자의 허혈성 뇌졸중

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Ischemic Stroke in Korean Patients with End-Stage Renal Disease Undergoing Maintenance Dialysis

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Background: In spite of higher incidence of stroke in dialysis patients compared to general population, the risk factor for stroke which is specific to ESRD is not fully understood. Patients with ESRD who develop stroke may have certain additional risk factors compared to non-stroke ESRD patients. We used data collected by the Hallym Stroke Registry to identify patient characteristics associated with acute ischemic stroke in ESRD who undergoing dialysis, with special concern on risk factors and stroke pattern.

Methods: We recruited patients with acute ischemic stroke in ESRD patients undergoing maintenance dialysis. Dialysis patients without stroke were selected as control group with age and sex matching. We compared the demographic features, stroke risk factors, laboratory findings in ESRD patients with or without ischemic stroke.

Results: During the recruitment period, total 1,013 of acute stroke patients were registered to Hallym Stroke Registry. Among them, 25 patients (2.5%) had been diagnosed as ESRD (19 hemodialysis, 6 peritoneal dialysis). The mean age of patients was 59.80 ± 9.94 and male to female ratio was 0.92:1. The most common ischemic stroke subtype was small vessel occlusion (n=12) followed by large artery atherosclerosis (n=7). Lesions of anterior circulation were found in 17 patients and those of posterior circulation were found in 6 patients. Two patients had lesions on both circulations. The average hospital stay was 22.6 ± 19.8 days. Two patients (8%) expired due to sepsis and transtentorial herniation resulting from IICP and the others were discharged either in clinically improved (68%) or unchanged state (24%). Stroke patients had longer duration of dialysis and higher systolic blood pressure compared to non-stroke ESRD patients. Total cholesterol and LDL cholesterol were significantly lower in stroke group. In multivariate analysis, lower level of LDL cholesterol was the only factor whichh was associated with development of stroke.

Conclusions: We found that duration of dialysis and systolic blood pressure were important in development of ischemic stroke in ESRD patients. Lower serum LDL level in stroke group suggests that serum cholesterol levels may act as a marker for malnutrition rather than atherosclerosis at least in ESRD patients.

Key Words: 말기신질환, 허혈성 뇌졸중, 콜레스테롤
ESRD, Ischemic stroke, Cholesterol