

투석환자에서 저혈당 발생의 임상적 의미

한림의대 내과학교실 및 신장연구소

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Clinical Significance of Hypoglycemia in End-stage Renal Disease Patients on Dialysis

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Background : End-stage renal disease (ESRD) is typically associated with impaired glucose metabolism. Some patients have hyperglycemia in response to glucose load, while others are able to maintain normoglycemia. But, ESRD is also a common predisposing condition for the development of hypoglycemia. We performed a retrospective study to describe the epidemiology of hypoglycemia in a population of ESRD patients on dialysis.

Methods : Retrospective and descriptive analyses were performed in five dialysis centers of Hallym University Medical Center in Korea, from September 1, 2006 to August 31, 2008. It included ESRD patients who treated with either hemodialysis or peritoneal dialysis for at least 1 month.

Results : Among 1248 dialysis patients (903 hemodialysis, 345 peritoneal dialysis) in a 2-year study period, we identified 128 patients who had documented hypoglycemia (220 episodes), for an incidence of hypoglycemia of 10.3% in dialysis patients. The mean lowest serum glucose level was 10.3 mg/dL (range, 5–49 mg/dL). Ninety-eight patients (76.6%) were diabetics, while others were non-diabetic patients. Insulin therapy (72.4% of diabetic patients) was the most common risk factors for hypoglycemia in dialysis patients. 38 (29.7%) had malnutrition, and 35 patients (27.8%) had evidence of infection. Twenty patients (15.6%) had no risk factors. Occurrence of hypoglycemia in dialysis patients was a threatening complication, since 42.9% of patients died within 14 days of the onset. The degree of hypoglycemia or the number of hypoglycemic episodes was not correlated with mortality. The lower serum albumin level was an independent risk factor associated with mortality.

Conclusion : The study demonstrated the relatively high incidence of hypoglycemia in dialysis patients. And development of hypoglycemia in dialysis patients especially with infection was associated with high rate of mortality.

Key Words : 저혈당, 투석, 말기신질환

Hypoglycemia, Dialysis, End-stage renal disease