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Comparing the etiologies of altered consciousness depending on patient's renal function

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Objectives:

Altered consciousness is attributed to several causes. Previous studies have reported that the risks of these conditions are higher among patients with end-stage renal disease and chronic renal failure than in the general population. Therefore, it could be inferred that the distribution of diseases causing altered consciousness may also be different compared to that in the general population. Therefore, this paper aimed to explore the difference in the distribution of diseases causing altered consciousness in patients with varying renal function.

Methods: The study collected data from patients who visited Chungnam National University Hospital, Daejeon, Korea, from January 2012 to December 2018, using electronic medical records. Information relating to chief complaints of changed mental status and altered mentality were collected. Patients were divided into dialysis patients group and general patients group.

Results:

A total of 203 dialysis patients and 548 general patients with altered consciousness visited center. The general patient group was divided into 178 patients with chronic kidney disease stage 3–4 (CKD group) and 370 patients with normal kidney function (general group). Findings from this study demonstrated that there were substantial differences in infection, cerebral hemorrhage, and hypoglycemia between the compared groups. Infection was higher in dialysis and CKD patients than in the general group.

Traumatic brain hemorrhage was the lowest in the general group, followed by the CKD group and dialysis patients, whereas spontaneous brain hemorrhage was the highest in the general group, followed by dialysis patients and the CKD group, respectively. Hypoglycemia was higher in the dialysis and CKD groups compared to that in the general group.

Conclusions: The etiology of altered consciousness was similar among CKD and dialysis patients and was comparatively different in the general group. Hence, it may be helpful to consider this in the initial evaluation and management of patients presenting with altered consciousness.

Figure 1.

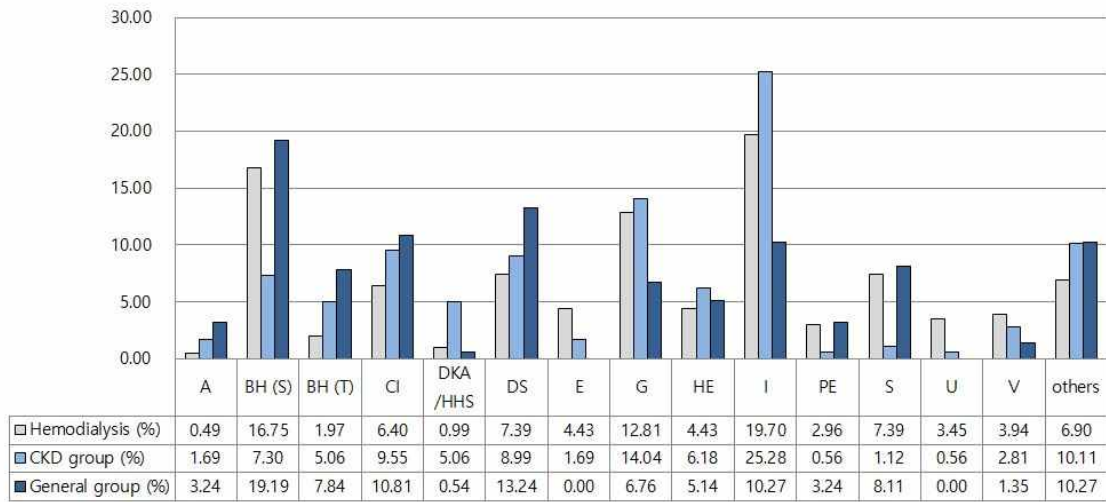


Figure 1. Distribution of etiologies of altered consciousness depending on patient's renal function
 A ; arrhythmia, BH(S); spontaneous brain hemorrhage, BH(T); traumatic brain hemorrhage, CI; cerebral infarction, DKA; diabetic ketoacidosis, HHS; hyperosmolar hyperglycemic state, E; electrolyte imbalance, G; hypoglycemia, HE; hepatic encephalopathy, I; infectious disease, PE; pulmonary edema, S; seizure, U; uremic encephalopathy, H; hypovolemia.