

야뇨증 치료 중 발생한 데스모프레신 연관 저나트륨혈증

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Hyponatremia Associated with Desmopressin used for Nocturia

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Purpose: Desmopressin is recently used for treatment of nocturia, but hyponatremia is concerned because of its anti-diuretic effect and potential impairment of urine dilution in the elderly. This study was undertaken to characterize hyponatremia occurring in adults using desmopressin for nocturia and to examine risk factors for desmopressin-associated hyponatremia.

Methods: Data were retrospectively analyzed from patients who were prescribed desmopressin for nocturia at a urology clinic in a single center from September 2010 through February 2013. A total of 236 patients were reviewed, and 61 and 3 patients were excluded due to absence of follow-up serum sodium data and due to prior hyponatremia (<135 mmol/L), respectively. In addition to demographic and laboratory parameters, hyponatremia-predisposing comorbidities (DM, hypertension, CVA, dementia, malignancy, and heart failure) and concurrent medications (ACEIs, ARBs, thiazides, SSRIs, NSAIDs) were evaluated to estimate risk factors by using multiple logistic regression analysis.

Results: In 172 patients (144 men, 28 women), age was 69.5±9.6 years (range, 42-91 years). The basal serum sodium was 140±2 mmol/L, and follow-up serum sodium measured at 21±22 days after using desmopressin was 138±5 mmol/L. Desmopressin-associated hyponatremia occurred in 24 patients (14%), and 7 were severe (serum sodium <126 mmol/L). In hyponatremic patients, serum sodium decreased by 11±6 mmol/L. Patients with hyponatremia were older than those with normonatremia (78±7 vs. 68±9 years, p<0.0001). Notably, none of the patients younger than 65 years had hyponatremia. Although women tended to increase the frequency of hyponatremia (7/28 vs. 17/144), the statistical significance was not reached. Presence of either comorbidities or concurrent medications was associated with hyponatremia. Patients with hyponatremia had lower basal hemoglobin (11±2 vs. 13±2 g/dL, p<0.001) and serum sodium (139±2 vs. 140±2 mmol/L, p<0.05) than those with normonatremia. Logistic regression after adjustment of basal serum sodium showed that advanced age (OR, 1.15; 95% CI, 1.03-1.27) and lower hemoglobin levels (OR, 0.64; 95% CI, 0.43-0.94) were independently associated with hyponatremia.

Conclusions: Hyponatremia is not uncommonly associated with desmopressin use in adult nocturia patients. Those with advanced age (>65 years) and anemia are at risk of desmopressin-associated hyponatremia and need to be carefully monitored.

Key Words: 저나트륨혈증, 데스모프레신, 야뇨증

Hyponatremia, Desmopressin, Nocturia