Safety and Efficacy of Desmopressin for the Treatment of Nocturia in Elderly Patients: A Cohort Study

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PURPOSE: Desmopressin is used widely to treat nocturnal polyuria (NP), but there is concern of hyponatremia especially in elderly patients. This study aimed to evaluate the safety and efficacy of long-term desmopressin treatment in elderly patients with NP.

METHODS: Patients who were ≥65 years old with NP were analyzed. All patients were started on 0.1 mg desmopressin, and the dose was escalated to 0.2 mg depending on patient symptoms. All patients were educated the mechanism of desmopressin. The voiding diary and serum sodium levels were evaluated at baseline, 3-7 days after starting treatment and every 3-6 months. Safety was evaluated by hyponatremia, hyponatremic symptoms and other adverse drug events. The mean changes in number of nocturia and nocturnal urine volume (NUV) were evaluated for efficacy.

RESULTS: A total of 68 patients were included. The mean age was 72.6 (66-85) years. The mean nighttime frequency was 3.0 ± 1.8 day, and the mean serum sodium level was 141.2 ± 2.1 mEq/L at baseline. The mean follow-up period was 27.9 months. The mean decrease in serum sodium level was 1.3 ± 3.4 mEq/L at the last follow-up (p = 0.003). Hyponatremia incidence was 4.4 %, and all patients recovered by stopping medication. Severe adverse events were not observed. The mean nighttime frequency had decreased by 2.1, and the NUV had decreased by 374.2 ± 261.3 mL at the last follow-up (p < 0.001).

CONCLUSIONS: Desmopressin at doses below 0.2 mg is safe and effective in elderly patients with NP if patients are well informed and are closely followed up.