

EFFICACY OF DESMOPRESSIN IN THE TREATMENT OF NOCTURNAL POLYURIA: IMPACT ON RELATED SLEEP QUALITY IN ELDERLY MALE

Hypothesis / aims of study

Nocturia results in sleep disturbance that may affect the quality of life. We investigated the efficacy of desmopressin combined with tamsulosin in patients with LUTS and nocturnal polyuria in elderly and to evaluate the impact of treatment on sleep quality.

Study design, materials and methods

Eighty male patients with lower urinary tract symptoms (LUTS) including nocturia who found to have nocturnal polyuria, defined as the nighttime urine production more than 33% of the 24 hours total urine volume determined by frequency volume (FV) chart, were recruited in this study. All had failed to respond to treatment with α 1- adrenoceptor antagonist (tamsulosin 0.2mg), their underline disease and evening fluid restriction. Desmopressin 0.2mg was administered orally at bedtime for 12 weeks. The participants completed a series of questionnaires on the Medical Outcomes Study (MOS) sleep scale and FV chart before and after the treatment.

Results

The patient population had a mean age of 62.7 \pm 13.0 (range 42-78). The mean duration of symptoms was 42.2 \pm 39.7 months. The number of nocturia episodes (from 3.49 \pm 1.83 to 2.03 \pm 1.35, p=0.01), nocturnal urine volume (p=0.01), nocturnal polyuria index (NPI)(p=0.01) and nocturia index (NI) (p=0.01) were significantly decreased after desmopressin treatment. Among the categories of the MOS sleep scale, hours sleep/night (p=0.042), shortness of breath (p=0.019), adequacy of sleep (p=0.001) were significantly changed with a decreased number of nocturia episodes. Adverse event was mild.

Interpretation of results

In the present study we found that the prevalence of nocturia significantly decreased after desmopressin treatment. The overall mean change in nocturnal frequency after 12 weeks of desmopressin treatment was 1.46 times per night. The estimated nocturnal urine volume, NPI, NI by FV chart were significantly decreased after treatment that confirms the previous study about effective desmopressin treatment for patients with nocturia.

Concluding message

Desmopressin combined with tamsulosin is an effective treatment for nocturnal polyuria in elderly male LUTS, where α 1- adrenoceptor antagonist therapy has failed. The sleep quality was also improved.

References

1. Asplund R, Sundberg B, Bengtsson P. Oral desmopressin for nocturnal polyuria in elderly subjects: a double-blind, placebo-controlled randomized exploratory study. *BJU Int.* 1999 ;83(6):591-5.
2. Mattiasson A, Abrams P, Van Kerrebroeck P, Walter S, Weiss J. Efficacy of desmopressin in the treatment of nocturia: a double-blind placebo-controlled study in men. *BJU Int.* 2002;89(9):855-62.
3. van Kerrebroeck P, Rezapour M, Cortesse A, Thüroff J, Riis A, Nørgaard JP. Desmopressin in the treatment of nocturia: a double-blind, placebo-controlled study. *Eur Urol.* 2007;52(1):221-9.

Disclosures

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