

Can hormonal replacement therapy be a solution for postmenopausal women with nocturia?

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Introduction & Objectives: Nocturia is a common cause in postmenopausal women. Literature suggests an improvement of nocturia by hormonal replacement therapy (HRT). Nevertheless, nothing is known about the different HRT strategies. The aim of this study is to observe the impact of different systemic HRT (oral or transdermal estradiol (E2)) in postmenopausal women on nocturia.

Materials & Methods: In this controlled, prospective observational trial, all patients were recruited (between March 2015 - June 2019) at the department of gynecology and counselled about HRT. Based on patient's choice, women were divided in three groups of HRT: no HRT (NH), substitution through oral E2 in combination with progesterone (OE) and transdermal E2 in combination with progesterone (TE). All women completed the ICI questionnaire on nocturia or LUTS (ICIQ-N or ICIQ-FLUTS) twice: at baseline and 6 months after initiating treatment. Moreover, bother linked with nocturia was reported on a VAS-scale, with '0' as having no bother and '10' with high bother. Nocturia was defined as ≥ 2 nocturnal voids. Descriptive statistics are presented as median (interquartile range). Comparisons were performed using McNemar test for categorical variables or Wilcoxon signed-rank test for continuous variables. A p-value < 0.05 was considered statistically significant. This study was approved by the local ethics committee (EC2014/1241, EC2018/0315).

Results: In total, 146 women with a median (IQR) age of 53 (50–56) years, were enrolled. Thirty-five did not opt for therapy, 67 favored OE and 44 chose TE. Median follow-up time was 5 (2–6) months. Baseline characteristics were similar between the different groups. Initially, 11% (4/35) patients with NH, 27% (18/67) with OE and 23% (10/44) with TE suffered from nocturia. After follow-up, this percentage decreased significantly ($p < 0.001$) for patients with OE substitution to 12% (8/67). In contrast, no significant reduction was seen in patients using NH ($p = 1$) and TE ($p = 0.01$), as the presence of nocturia decreased to 6% (2/35) and 14% (6/44) respectively. Moreover, patients who suffered from nocturia at baseline, reported a significant decrease in bother, linked to nocturia, in both treatment groups ($p = 0.004$ for OE and $p = 0.02$ for TE). At baseline, a median VAS of 6 (4.0–7.5) and 5 (2.5–6.5) was reported by patients in the OE and TE group respectively. This bother decreased to 3.0 (1.0–5.0) for OE and 1.5 (0.0–4.0) for TE. No improvement of this bother score was seen in the NH group.

Conclusions: This analysis shows that HRT is a promising treatment for nocturia in postmenopausal women. In this small cohort, oral E2 in combination with systemic progesterone reduced the number of nocturnal voids significantly. In both treatment groups, patients reported a significant lower bother connected with nocturia. However, a RCT is necessary to confirm this findings.