Section: MONOGRAPH
Abstract: MON-06

Efficacy and safety of hormone replacement therapy for migraine in climacteric women: A systematic review and meta-analysis

Gabrielly Jaime Pereira, Luciano de Melo Pompei, José Roberto Lambert
Centro Universitário FMABC, Santo André, Brazil
gabrielly.pereira@aluno.fmabc.net

INTRODUCTION: Migraine management during the climacteric represents a complex clinical challenge due to the influence of estrogen fluctuations on pain pathophysiology. Although Hormone Replacement Therapy (HRT) is the gold standard for vasomotor symptoms, its impact on the frequency and intensity of migraine attacks remains controversial in the literature. **METHODS**: A systematic review and meta-analysis were conducted following PRISMA 2020 guidelines. The search encompassed PubMed, Embase, and Cochrane Library databases. Eleven studies (randomized controlled trials and controlled cohorts) were included, totaling a sample of 38,642 participants. Primary efficacy outcomes were analyzed using Standardized Mean Difference (SMD), and cardiovascular safety was assessed via Odds Ratio (OR), employing a random-effects model. **RESULTS**: The meta-analysis revealed that oral administration was associated with a non-significant worsening in attack frequency (SMD +0.36; 95% CI -0.19 to +0.92). In contrast, non-oral routes (transdermal/implants) demonstrated a neutral or protective effect (SMD -1.03; 95% CI -3.25 to +1.19). Notably, testosterone implants promoted a significant reduction in pain intensity (SMD -3.30; $p<0.001$). Regarding safety, the oral route presented an elevated risk of thromboembolic events (OR between 1.42 and 2.05), which was not observed in the transdermal intervention arms. **DISCUSSION**: The results suggest that the route of administration is a major determinant of clinical outcomes. First-pass hepatic metabolism associated with the oral route appears to exacerbate both the migraine inflammatory cascade and prothrombotic risk, effects that are minimized by the direct systemic absorption of non-oral routes. **CONCLUSION**: HRT should not be managed as a single therapeutic entity in migraine patients. The oral route should be avoided in favor of transdermal or androgenic approaches, which offer superior efficacy and safety profiles in this subpopulation.

KEYWORDS: Migraine; Climacteric; Hormone replacement therapy; Transdermal administration.

ABCS Health Sci. 2026;51(Suppl.):e0261037
https://doi.org/10.7322/2026comuabc51.mon06