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Comparison of therapeutic modalities in the management of menstrual migraine: a systematic review

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Introduction

Menstrual migraine (MM) is a subtype of migraine associated with the menstrual cycle, related to the decline in estrogen levels during the late luteal phase. This hormonal alteration contributes to the triggering of migraine attacks through neurotransmitter modulation and neurogenic inflammation. Due to its significant impact on quality of life, different therapeutic modalities have been investigated. However, uncertainties remain regarding the efficacy of these interventions.

Objective

To evaluate the efficacy of different therapeutic modalities in reducing the frequency and intensity of attacks in women with menstrual migraine, compared with placebo or other treatments.

Methods

A systematic review was conducted according to PRISMA criteria to answer the following question: "In women with menstrual migraine, are different therapeutic modalities effective in reducing the frequency and intensity of attacks compared with placebo or other treatments?" Searches were performed in the PubMed and LILACS databases using the descriptors "Menstrual Migraine," "Migraine Disorders," and "Treatment" combined with AND. Randomized clinical trials and meta-analyses published within the last ten years were included. Studies that did not primarily address treatments for menstrual migraine were excluded. Study selection was independently conducted by two reviewers, resulting in the final inclusion of eight articles.

Results

Different therapeutic modalities demonstrated efficacy in the management of MM, reducing the frequency, intensity, and duration of attacks. Triptans outperformed placebo in both acute and preventive treatment, with sumatriptan 100 mg showing greater pain relief at 2 hours (OR: 4.32–4.62) and 24 hours (OR: 4.81). Frovatriptan (2.5 mg twice daily) showed greater short-term prophylactic efficacy (OR: 1.87), reducing recurrence of attacks. Anti-CGRP monoclonal antibodies, such as erenumab and galcanezumab, demonstrated greater preventive benefit, with erenumab reducing monthly migraine days by up to −2.1 days and increasing the likelihood of a ≥50% reduction in attacks by up to 2.8-fold versus placebo. Hormonal therapies, including contraceptives containing drospirenone, desogestrel 75 mcg/day, transdermal estradiol, and GnRH agonists, reduced attacks and analgesic use. Among non-pharmacological approaches, auricular therapy showed greater effectiveness than flunarizine (93.5% vs. 77.4%), while acupuncture and acupressure reduced migraine days without serious adverse events. Resveratrol did not demonstrate significant benefit.

Conclusion

Different therapeutic modalities are effective in the management of MM, reducing the frequency, intensity, and recurrence of attacks. Triptans stood out in acute and prophylactic treatment, while anti-CGRP therapies showed greater preventive benefit. Hormonal therapies and non-pharmacological approaches, such as acupuncture and auricular therapy, also demonstrated promising results, reinforcing the importance of individualized treatment.

Keywords:
Treatment outcome
Migraine disorders
Therapeutics
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