



INTRANASAL TIMOLOL IN THE ACUTE TREATMENT OF MIGRAINE: A NEW APPROACH

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OBJECTIVE: Migraine is a prevalent primary headache and represents one of the main causes of disability in young people in the world. For instance, migraine ranked second in prevalence of non-communicable diseases in Brazil. Despite the current therapeutic arsenal, there is a lack of effective and affordable abortive medications for migraine, especially for patients with contraindications to triptans. Timolol, a non-selective beta-blocker approved by the FDA for migraine prophylaxis, has slow absorption and high hepatic metabolism in oral form, which limits its use as an abortive agent. In this scenario, intranasal use has emerged as a promising alternative.

METHODS: Narrative review.

RESULTS: The intranasal route allows rapid absorption of timolol by the highly vascularized nasal mucosa, reaching peak serum levels in about 14 minutes, with bioavailability of over 90%, compared to a serum peak in 1-2 hours and bioavailability of 50-60% for the oral route. A case series recorded by John C. Hagan III and Steven C. Kosa showed a positive response in 62.5% (10/16) of patients with acute migraine refractory to the use of intranasal timolol 0.5%, with a favorable safety profile and minimal adverse effects. Formulations with mucoadhesive vehicles, such as Mucolox®, increase the retention and absorption of the drug in the nasal mucosa. This route offers a viable and cost-effective alternative, especially useful for populations with limited access to anti-CGRP therapies or contraindications to vasoconstrictors. It should be noted that the product is only available in some specific compounding pharmacies, primarily in the United States, and there are no records of similar formulations been produced in Brazil.

CONCLUSÃO: Nasal timolol (Figure 1) shows potential as an effective approach for the acute treatment of migraine. Randomized, placebo-controlled studies are necessary to confirm its efficacy and safety and to establish guidelines and dosage range of use.



Figure 1. Intranasal Timolol administration

REFERÊNCIAS:

