Headache Medicine

Tricyclic Antidepressants as Prophylactic Treatment for Tension-Type Headache

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Introduction
Although the pathophysiological mechanisms causing tension-type headache are not entirely understood, several hypotheses have been proposed, including muscle contraction and stress. According to current literature, it can be stated that tension-type headache involves both peripheral and central mechanisms that result in pain. This class of headache is characterized by diffuse or bilateral pain of mild to moderate intensity and can be episodic (up to 15 days per month, with pain lasting from 30 minutes to 7 days) or chronic (more than 15 days per month for 6 months or longer). Treatment options may include analgesics and muscle relaxants; however, studies indicate the effectiveness of prophylactic use of tricyclic antidepressants for tension-type headache. This class of medications is characterized by its action of inhibiting the reuptake of serotonin and noradrenaline in the synaptic cleft, resulting in an analgesic effect. Thus, based on the above, this literature review aims to assess the efficacy of tricyclics as prophylactic treatment for tension-type headache.

Objective
The aim of this review is to evaluate the effectiveness of tricyclic antidepressants in the prophylactic treatment of episodic or chronic tension-type headache, as well as to examine the feasibility of these drugs in terms of potential side effects, observing their action in the disease's pathophysiology and in individuals' bodies.

Methods
This is a systematic literature review using the PubMed and Scielo electronic databases, including articles published in the last 5 years. The search terms used were "tension type headache," "treatment," and "antidepressants." Articles not related to the topic were excluded.

Results
Tricyclic antidepressants, through their action of inhibiting the reuptake of serotonin and noradrenaline in pain-suppressing pathways, have analgesic and muscle relaxant effects. Furthermore, their analgesic effect is not linked to the antidepressant effect, allowing their use in situations where patients do not exhibit depressive symptoms. Since the pathophysiology of headache is not entirely explained, the effect of tricyclics on relaxation may be associated with a reduction in stress, resulting in decreased pain. For example, the use of Amitriptyline was considered effective in prophylactic treatment, although it was associated with a higher number of side effects compared to Mirtazapine, a tetracyclic medication, likely due to its more selective action on neurological receptors. Patients who used Amitriptyline reported drowsiness and xerostomia. Therefore, it is necessary to observe whether side effects diminish over time or persist, depending on each patient, to assess the feasibility of treatment continuation. Another factor to note is that the beneficial effects of tricyclics appear to increase over time, so their prophylactic use in patients with chronic tension-type headache may be more effective than in patients with episodic headache. Additionally, the use of tricyclic antidepressants in patients with tension-type headache resistant to common analgesics has shown to be efficient.

Conclusion
Prophylactic pharmacological therapy with tricyclic antidepressants for tension-type headache, as evaluated in this review, proves to be effective within expected parameters. However, it is the responsibility of the attending healthcare professional to assess whether the treatment's benefits outweigh the risks of side effects. Tricyclics have demonstrated significant effectiveness in the treatment of chronic tension-type headache, and if side effects tend to decrease over time, this therapy may be more favorable for continuous use. Thus, the development of guidelines for the use of these medications would be ideal for determining their feasibility

Keywords: Headache; Tension-type; Tricyclics; Antidepressants; Treatment.