Headache Medicine

Impact of pharmacological and behavioral interventions on post-traumatic headache in children: a literature review

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Introduction

The diagnosis of Post-traumatic headache (PTH) in children presents challenges, mainly attributed to the limited understanding of the pathology by general pediatricians, together with the greater vulnerability to traumatic brain injuries in this pediatric age group. The incidence of this pathology among children is between 3 and 11%, being higher among girls and adolescents compared to children. By definition, headache that develops within 1 week after head trauma (or within 1 week after regaining consciousness) is referred to as PTH. Although the majority of PTH resolves within 6-12 months after injury, approximately 18-33% of PTH persists beyond 1 year. Most post-traumatic headaches are migraine or tension headaches (TTH), but occipital neuralgia, cervicogenic headache, and medication overuse headache also occur. The most common clinical presentations of this headache are neck pain, cognitive complaints and psychological and psychiatric symptoms. This symptomatology is still an undertreated condition due to limited pharmacological treatment options. Thus, multimodal non-pharmacological approaches, which account for comorbidities and psychosocial factors, are often used in patients with PTH.

Objective

review the scientific literature in order to analyze the impacts of drug therapy on post-traumatic headache in children.

Methodology

this is a bibliographical research conducted in the MEDLINE and EMBASE databases, using the descriptors traumatic headache, post trauma headache, secondary headache, traumatic brain injury, posttraumatic headache, pediatric and their combinations. Original articles published in Portuguese and English between 2017 and 2023 were included, with themes relevant to the object of study, with 6 studies being selected to compose this review.

Results

PTH treatment requires a multidisciplinary approach and includes a combination of drug-free and pharmaceutical methods. Increasing evidence suggests that combined pharmacological and non-pharmacological interventions, encompassing non-invasive neuromodulation, physical therapy, cognitive behavioral treatment, and education, may be the best approaches for PTH and related comorbidities. For acute treatment, nonsteroidal anti-inflammatory drugs can be used. If headaches have migratory characteristics and nonsteroidal anti-inflammatory drugs are not effective, triptans may be beneficial. For preventive treatments, some reports indicate that amitriptyline, gabapentin, or topiramate may be beneficial. Amitriptyline is a good choice because it can be used to treat migraines and tension-type headaches. Nerve blocks, nutraceuticals (e.g., melatonin), and behavioral therapies may also be helpful, and lifestyle factors, especially proper sleep hygiene and strategies for coping with anxiety, should be emphasized.

Conclusion

rigorous assessment and diagnosis are vital to treating post-traumatic headaches effectively. A multidisciplinary approach is needed to address all possible factors contributing to headaches and any comorbid conditions that may delay recovery or alter treatment choices. Improved acute post-traumatic headache therapy may reduce the likelihood of developing chronic headaches, which can be especially problematic to manage effectively and can be functionally debilitating.

Palavras-chave: traumatic headache; post trauma headache; secondary headache; traumatic brain injury; posttraumatic headache; pediatric.