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A Migraine Headache – Review article

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Abstract:

Migration is a typical longstanding neurological dysfunction that comprises occurrence of various episodes of headache that range in severity between moderate and very intense coupled with an inclination to throw up, vomit, and be sensitive to both light and sound. It is a major disability cause in the globe. The prevalence of the condition is about 10-15 percent of the world population and more common in women. Migraine pathophysiologically consists of the stimulation of the trigeminovascular system and the secretion of calcitonin gene-related peptide (CGRP), which plays a role in neurogenic inflammation. Clinical features include unilateral pulsating headache lasting 4–72 hours, sometimes preceded by aura. Diagnosis is primarily clinical. Management includes acute and preventive therapies such as NSAIDs, triptans, beta-blockers, and CGRP antagonists. Recent advances have improved treatment outcomes, though migraine remains underdiagnosed and undertreated.

Keywords: Migraine, neurological disorder, headache.

INTRODUCTION

Migraine is a long-term neurological condition which is marked by periodic instances of moderate to severe headache with autonomic and neurological symptoms. It has been identified as among the leading causes of disability all over the world with tremendous impacts in normal functioning and quality of life (1,2).

EPIDEMIOLOGY AND PATHOPHYSIOLOGY

Migraine is a neurosis with an approximate prevalence of 10-15 percent of the world population, which is observed to occur more frequently in women perhaps as a result of hormones. The disorder typically starts in adolescence and its peck starts in middle adulthood (3,4).

Migraine pathophysiology triggers the trigeminovascular system, and it releases neuropeptides, which cause the inflammation and the transmission of pains, including a calcitonin gene-related peptide (CGRP). The spread of depression of the cortex is linked to migraine aura and central sensitization leads to chronicity (5,6).

CLINICAL FEATURES

Migraine is usually described as unilateral, pulsating headache which has a duration of 4-72 hours with nausea, vomiting, photophobia and phonophobia. There are patients with aura (f.e., visual or sensory disturbances) before the headache starts (7).

DIAGNOSIS

Diagnosis is mostly clinical with criteria that are defined by the International Classification of Headache Disorders (ICHD-3). Neuroimaging should be suggested in case of atypical features and red flags (7,8).

MANAGEMENT

Acute therapy involves nonsteroidal anti-inflammatory agents (NSAIDs), triptans, and more recent agents. Preventive treatment entails the use of beta-blockers, antiepileptics, antidepressants, and CGRP monoclonal antibodies. Modification of lifestyle and ease of triggers are vital elements of management (5,9).

RECENT ADVANCES

Recent developments in migraine treatment focus on CGRP-targeted therapies and neuromodulation techniques, which have shown improved efficacy and tolerability compared to traditional treatments (6,9).

CONCLUSION

Migraine is a multifactorial neurological disorder with a substantial global burden. Advances in understanding its pathophysiology have led to improved diagnostic and therapeutic approaches; however, early identification and individualized treatment remain critical for reducing morbidity and improving patient outcomes (1,5).

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