ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-6, ISSUE-2

MIGRAINE AND OTHER HEADACHES

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ANNOTATION

Migraine and other primary headaches are among the most common neurological conditions in modern neurology, significantly reducing work capacity and quality of life. According to the World Health Organization, headaches—particularly migraine—are among the leading causes of disability. This article analyzes the pathophysiological mechanisms, clinical forms, diagnostic criteria, and differential diagnosis of migraine. Additionally, a comparative discussion with tension-type headaches and cluster headaches is provided. Based on contemporary neurological literature and clinical guidelines, evidence-based approaches to the diagnosis and treatment of migraine are examined. The findings emphasize the importance of early detection of migraine and other headaches and the selection of individualized treatment strategies.

KEYWORDS

Migraine, headache, primary headaches, diagnosis, treatment, neurology, differential diagnosis, clinical analysis, prevention, individualized therapy

INTRODUCTION

Headaches are among the most common symptoms in neurology, affecting a significant portion of the global population. They are notable for reducing quality of life, impairing work capacity, and negatively affecting psychological health. In particular, migraine is a chronic condition characterized by recurrent, severe, pulsating headaches, often accompanied by autonomic and neurological symptoms. According to the World Health Organization (WHO), migraine and other primary headaches are among the leading causes of disability. These conditions have not only individual but also socio-economic importance due to lost productivity and increased healthcare costs.

In clinical practice, it is essential to identify headaches and differentiate them from other types, such as tension-type headache or cluster headache. Moreover, modern approaches to diagnosis and treatment, particularly evidence-based protocols and individualized therapy strategies, play a critical role. This article analyzes the pathophysiology, clinical features, diagnostic methods, and treatment approaches for migraine and other primary headaches, as well as their impact on quality of life and preventive possibilities.

MATERIALS AND METHODS

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THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-6, ISSUE-2

This study was conducted using a literature review approach based on international neurological literature, clinical guidelines, and contemporary scientific publications. Primary sources included:

- International neurological guidelines on migraine and other primary headaches (The International Classification of Headache Disorders, 3rd edition – ICHD-3).
- Reliable textbooks and reference books on neurology and clinical neurology (B. W. Burch, S. Silberstein, R. May).
- Scientific articles from PubMed and Scopus over the last 10 years, particularly evidence-based studies.

The following methods were applied in the analysis:

- **Pathophysiological analysis:** Examining neurochemical and vascular mechanisms of migraine and other headaches, including the role of the trigeminovascular system.
- **Clinical classification and diagnosis:** Identification of headache types according to ICHD-3 criteria, with comparison of migraine, tension-type headache, and cluster headache for differential diagnosis.
- **Treatment and prevention approaches:** Analysis of evidence-based therapy strategies, including pharmacological and non-pharmacological interventions.

The primary objective of the study was to analyze the clinical and pathophysiological characteristics of migraine and other primary headaches, define diagnostic criteria, and evaluate contemporary treatment strategies.

RESULTS

Based on the literature review and existing clinical guidelines, the following results were identified:

- **Prevalence and clinical features of migraine:**

Migraine occurs in 10–15% of adults worldwide, with women affected 2–3 times more often than men. Typical clinical features include unilateral, pulsating headache, light and sound sensitivity, and the presence of an “aura” in some cases. Attacks typically last 4–72 hours.

- **Tension-type headache:**

Tension-type headaches are the most common primary headache, usually bilateral, described as a pressing or tightening pain, and rarely associated with severe autonomic symptoms.

- **Cluster headache:**

Cluster headaches are rare but extremely painful, usually unilateral, affecting the face and eye region. Pain occurs episodically over weeks to months.

- **Diagnostic criteria:**

According to ICHD-3 requirements, migraine, tension-type, and cluster headaches are distinguished via differential diagnosis. Migraine diagnosis relies on attack frequency, pain characteristics, autonomic symptoms, and presence of aura.

- **Treatment approaches:**

Migraine management includes acute therapy (triptans, NSAIDs) and prophylactic therapy (beta-blockers, antiepileptic drugs). Management of tension-type headaches emphasizes stress reduction, physical therapy, and analgesics. Cluster headaches are most commonly treated with oxygen therapy and sumatriptan injections.

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- **Prevention and impact on quality of life:**

Early diagnosis and selection of individualized treatment strategies are crucial for maintaining work capacity and improving quality of life.

Table 1. Key characteristics of migraine and other primary headaches

Type	Prevalence	Pain Characteristics	Other Symptoms	Treatment Approach
Migraine	10–15% adults	Unilateral, pulsating	Aura, light/sound sensitivity	Triptans, NSAIDs, prophylactic drugs
Tension-type	20–30% adults	Bilateral, pressing/tightening	Few autonomic symptoms	Analgesics, stress reduction, physiotherapy
Cluster	Rare	Unilateral, severe	Eye redness, lacrimation	Oxygen therapy, sumatriptan injection

DISCUSSION

Migraine and other primary headaches are common neurological problems whose proper diagnosis and treatment can significantly improve patients' quality of life. The results indicate that migraine is more common in women and is characterized by pulsating, unilateral pain, autonomic symptoms, and sometimes aura. These features are key for differentiating migraine from tension-type or cluster headaches.

Tension-type headaches are most common, generally less severe, bilateral, and rarely associated with autonomic symptoms. Stress reduction and analgesics are primary treatments. Cluster headaches are rare but severe, requiring prompt and effective management, such as oxygen therapy or sumatriptan injections.

It is important to recognize that headaches should not be viewed merely as symptoms but as conditions affecting patients' psychological and social well-being. Choosing individualized treatment strategies, implementing preventive measures, and adhering to evidence-based protocols can significantly reduce the adverse consequences of migraine and other headaches. Early identification and classification of headache types are crucial for maintaining patient productivity and quality of life. Thus, a comprehensive approach to diagnosing and treating migraine and other primary headaches is necessary in neurological practice.

CONCLUSION

Migraine and other primary headaches are prevalent neurological conditions with a significant impact on quality of life. Study findings indicate:

- Migraine occurs more frequently in women and is characterized by pulsating, unilateral pain with autonomic symptoms.
- The bilateral nature and minimal autonomic involvement of tension-type headaches are key differentiating factors.
- Cluster headaches are rare but severe and episodic, requiring prompt and effective treatment.
- Evidence-based and individualized treatment strategies are vital for preserving work capacity and improving quality of life.

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Early diagnosis, differentiation of headache types, and implementation of preventive measures should be considered a central task in neurological practice, supporting long-term health and quality of life.

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