



Original Article

Understanding Headache Disorders: A Comprehensive Analysis of Clinical Variants in Outpatient Populations at Lady Reading Hospital, Peshawar

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Abstract

Objective: Aim of this study was to determine the prevalence of different clinical variants of headaches among patients presented to medical and neurology outpatient departments at Lady Reading Hospital, Peshawar from December 2023 to June 2024, like migraine, tension-type, and cluster headaches and other less common variants.

Methods: Descriptive Cross-sectional study conducted at the medical and neurology outpatient departments of Lady Reading Hospital, Peshawar, from December 2023 - June 2024. Patients aged 18 years and above were enrolled in this study who presented with headache. Exclusion criteria included patients with a prior history of head injury, malignancy, hypertension, diabetes. Data collected after informed consent and ethical approval from institutional ethical committee IRB by using a structured questionnaire including demographic details, headache features and its classification and medical history. Data was analyzed using descriptive statistics. Prevalence rates for each headache variant were calculated, and gender distribution was assessed.

Results: 500 patients were included in the study, with a mean age of around 35 years. The female-to-male ratio was approximately 2:1. The most common headache variants identified were migraine headaches (40%), tension-type headaches (35%), and cluster headaches (5%). Secondary headaches accounted for 20% of cases. Medication-overuse headache found most prevalent among them (10%). Other rare causes including trigeminal neuralgia (TN) and giant cell arteritis (GCA) were also reported in small percentages. Secondary Headaches caused by sinusitis and hypertension were noted in several patients. In conclusion, migraine was more prevalent in females, while tension-type headaches showed a more balanced gender distribution. The majority of patients reported headache of moderate to severe intensity which significantly affecting their daily activities and overall quality of life.

Conclusion: This study highlights the high prevalence of primary headaches particularly migraine and tension-type headaches among patients presenting to OPDs. Although rare variants like TN and GCA were also reported in few cases and found less frequent. Study findings emphasize the need for public awareness campaigns and improved headache management strategies for timely diagnosis and treatment in order to improve quality of life for affected individuals.

Keywords: Headaches, Migraine, Tension-Type Headaches, Cluster Headaches, Prevalence.

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Introduction

Headache is amongst most common neurological disorders and a significant public health concern worldwide. Over 90 % of people experience headache in their lifetime and almost half of the adult population experience active headache disorder according to the World Health Organization (WHO),

representing their widespread nature and impotence for effective management and prevention. Headache affects people of all ages, races and socioeconomic status and is more common in women. Some headaches are extremely debilitating and have significant impact on an individual's quality of life, imposing huge costs to healthcare and indirectly to

the economy in general. Only a small proportion of headache disorders require specialist input. The vast majority can be effectively treated by a primary care physician or generalist with correct clinical diagnosis that requires no special investigation. Headache is usually classified into primary such as migraine, tension-type, and cluster headaches and secondary types usually due to underlying conditions like hypertension, sinusitis, or intracranial pathology.

The burden of headache disorders on our healthcare systems including tertiary care hospitals is huge and a significant number of patient visits outpatient departments (OPDs) daily. Headache has been an unaddressed cause of morbidity around the world, it has remained largely unrecognized in the developing world. Most clinical and epidemiological studies have originated in developed countries and there is scarce literature to support treatment guidelines or public health interventions to deal with headache in low and middle-income countries where 85% of the world's population lives. Despite the significant load that headache disorders place on healthcare systems, there is a dearth of localized data on their prevalence and characteristics. Previous studies conducted are suggesting that socioeconomic status, lifestyle and gender commonly affecting the prevalence and type of headaches. Rationale of present study was to identify prevalence of different variants of headaches among patients visiting our OPDs.

Methods

Study Design and Setting: Descriptive Cross-sectional study conducted at the medical and neurology outpatient departments of Lady Reading Hospital, Peshawar, from December 2023 - June 2024.

Participants: Patients aged 18 years and above were enrolled in this study who presented with headache. Exclusion criteria included patients with a prior history of head injury, malignancy, hypertension, diabetes or neurological disorders etc

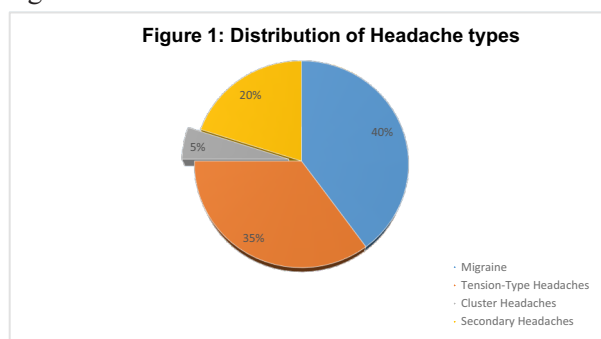
Data Collection: data collected after informed consent and ethical approval from institutional ethical committee IRB by using a structured questionnaire including demographic details, headache features and its classifications and medical history.

Statistical Analysis: Data was analyzed using descriptive statistics. Prevalence rates for each headache variant were calculated, and gender distribution was assessed.

Results

A total of 500 patients participated in the study, with a mean age of approximately 35 years with age range of 18-70 years and female to male ratio of 2:1. The majority of patients reported moderate to severe headache intensity, significantly impacting their daily activities. Each of medication-overuse headache and other secondary causes proportionate to 10% while rare variants of headache e.g., TN & GCA were presented in <5% of participants.

The headache variants identified were presented in figure 1.



Discussion

This study highlights the significant prevalence of different variants of headache disorders among patients attending the outpatient departments of Lady Reading Hospital, Peshawar. Data suggesting that migraine headache is most common variant followed by tension-type headaches which is consistent with global trends. So the high prevalence of these disorders emphasizes the importance for timely medical intervention in order to prevent active attacks of headaches and its management. Prevalence Insights of migraine headache found more among females. Its pathophysiology is complex and multifactorial often triggered by hormonal changes, stress, and certain environmental factors like flashing lights, noise, computer use, coffee etc. so its important to identify its triggers which helps in its prevention and effective treatment plans

Tension-type headaches found slightly less prevalent but still represent a significant concern as it's commonly seen in patients with increased level of stress and certain lifestyle factors.

The impact of current modern life style on mental health may contribute to the rising prevalence of these headaches so for improving patients' quality of life, effective management and prevention by identifying its triggers is vital.

20 % patients were found to have secondary headaches so thorough diagnostic evaluation is important to exclude secondary causes before

labelling any patient as primary headache disorder. Analgesics overuse headaches using over the counter medications seen in certain cases so Healthcare providers should educate patients on the potential risks of overusing pain medications and to prevent its further complications.

Secondary causes like hypertension and sinusitis also need immediate attention and appropriate treatment. Its identification is crucial to improve headache symptoms and prevent relapse. Certain rare headache variants like trigeminal neuralgia (TN) and giant cell arteritis (GCA) in which patient present with its typical features reported in few cases but health care provider should be aware of it while evaluating a patient who present with headache disorders. Timely diagnosis and management overall improve prognosis and prevent further complications. Such cases need to be managed by a specialized health care provider.

Headaches can significantly impair patients quality of life leading to reduced productivity and functioning at their work place and home and emotional distress. Effective management and preventive strategies are required in order to improve their quality of life and immediate consultation with qualified healthcare professional is needed. The findings of this study stress the importance of timely referrals to qualified specialists for headache management. Ensuring that patients receive the appropriate care based on accurate diagnoses is critical for effective treatment. Healthcare systems must prioritize the development of protocols that streamline the referral process, allowing patients to access necessary medical care promptly.

In conclusion, this study suggestive of significant burden of headache disorders among patients visiting our outpatient settings. Timely identification and management of headache variants is essential to enhance patient outcomes and improve quality of life. By focusing on early intervention and appropriate treatment strategies, healthcare providers can play a pivotal role in managing headache disorders effectively.

Conclusion

This study highlights the significant burden of headache disorders in the region, emphasizing the necessity for enhanced management strategies and public awareness initiatives. Future research should focus on longitudinal studies to better understand the long-term impact of headache disorders on quality of life.

Ethical Approval: The IRB/EC approved this study via letter no. 1067/LHR/MTI dated December 29, 2023.

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Authors' Contribution

ZM: Conception

SZ: Design of the work

ZM,SZ: Data acquisition, analysis, or interpretation

SZ: Draft the work

ZM: Review critically for important intellectual content

All authors approve the version to be published

All authors agree to be accountable for all aspects of the work

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