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Original Research Paper

General Medicine

DECIPHERING CHRONIC HEADACHE - THE CLINICAL AND RADIOLOGICAL LANDSCAPE

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ABSTRACT

Background: Headache is one of the most common and disabling conditions encountered in clinical practice, accounting for a tenth of general-practitioner visits, a third of neurology referrals and a fifth of medical admissions. The Global Burden of Disease Study (2019) ranked it the third leading cause of disability among 369 diseases studied. Chronic headache - defined as headache occurring on 15 or more days a month - affects roughly 4% of adults and is classified as primary or secondary under the International Classification of Headache Disorders (ICHD-3). **Objective:** To analyse the clinical and radiological profile of patients presenting with chronic headache. **Methods:** A prospective observational study of 100 patients aged above 18 years with chronic headache was conducted at Kanachur Institute of Medical Sciences, Mangalore, between March and September 2024. Severity was graded using MIDAS (for migraine) and the Visual Analogue Scale (for other headache disorders); CT/MRI brain imaging was obtained where red-flag symptoms were present, and patients were categorised as primary or secondary headache. **Results:** Of the 100 patients, 68% were female and 32% male. Tension-type headache (36%) and migraine (27%) were the commonest primary types; frontal location (43%) and a throbbing character (52%) predominated, and stress (58%) was the leading aggravating factor. Neuroimaging was normal in 53.3% of patients, while sinusitis (15%) and cervical spondylosis (10%) were the most frequent secondary radiological findings. **Conclusion:** Chronic headache is a complex condition that requires a comprehensive clinical and radiological approach. Primary headaches are largely diagnosable on clinical grounds, whereas secondary causes - particularly when accompanied by red-flag features such as sudden severe headache, vomiting or neurological deficits - warrant prompt imaging, since earlier detection improves outcomes and reduces the impact on daily life.

KEYWORDS : Chronic headache, tension-type headache, migraine, secondary headache, neuroimaging, ICHD-3

INTRODUCTION

Headache is among the most common and disabling conditions in clinical medicine, accounting for one in ten general-practitioner visits, one in three neurology referrals, and one in five medical admissions.

The Global Burden of Disease Study (2019) ranked headache disorders as the third leading cause of disability among the 369 diseases surveyed. Chronic headache - occurring on 15 or more days per month - affects approximately 4% of adults.

The International Classification of Headache Disorders (ICHD-3β) divides headache disorders into primary and secondary categories, a distinction that guides both work-up and management.

OBJECTIVES

To analyse the clinical and radiological profile of patients presenting with chronic headache.

MATERIALS AND METHODS

Study design: Prospective observational study.
Study period: March 2024 to September 2024.
Place of study: Kanachur Institute of Medical Sciences, Mangalore.
Sample size: 100 patients.
Inclusion criteria: Patients aged above 18 years presenting with chronic headache.
Exclusion criteria: Pregnant women.

Data were collected using a structured proforma addressing the study objectives, after obtaining informed consent. The MIDAS score was used for migraine and the Visual Analogue Scale (VAS) for all other headache disorders. CT brain / MRI brain imaging was performed where red-flag symptoms were present, and patients were categorised into primary and secondary headache.

RESULTS

Of the 100 patients studied, 68% were female and 32% were male.

Types of Chronic Headache

Table 1: Distribution of headache types (n = 100)

Category	%
Tension-type headache	36
Migraine	27
Sinusitis-related	15
Cervical spondylosis	9
Cerebral venous sinus thrombosis	5
Medication overuse headache	4
Cluster headache	2
Intracranial lesions	2

Location of Pain

Table 2: Site of headache

Category	%
Frontal	43
Temporal	25
Occipital	21
Diffuse	11

Headache Character

Table 3: Nature of pain reported

Category	%
Throbbing	52
Dull aching	28
Sharp / stabbing	12
Pressure-like	8

Aggravating Factors

Table 4: Reported aggravating factors

Category	%
Stress	58
Sleep deprivation	27
Physical exertion	12
Certain food	3

Associated Symptoms

Table 5: Symptoms accompanying headache

Category	%
Nausea / vomiting	52
Photophobia / phonophobia	40
Neck stiffness	16
Aura	12

Age Distribution

Table 6: Age-wise distribution of patients

Category	%
8-30 years	40
31-45 years	34
46-60 years	22
Above 60 years	4

Radiological Findings

Table 7: CT / MRI brain findings

Category	%
Normal brain imaging	53.3
Sinusitis (frontal, maxillary, ethmoid)	15
Cervical spondylosis	10
Chronic ischemic changes	6.7
Cerebral venous sinus thrombosis	5
Other / non-specific findings	3.3
Hydrocephalus or raised ICP signs	1.7
Mastoiditis	1.7
Space-occupying lesions	0

Severity - VAS Score

Table 8: VAS-graded severity (non-migraine headaches)

Category	%
Moderate (4-6)	44
Mild (0-3)	32
Severe (7-10)	24

Severity - MIDAS Score (migraine)

Table 9: MIDAS grade among migraineurs

Category	%
Grade 3	23
Grade 2	10
Grade 4	7
Grade 1	5

DISCUSSION

A higher diagnostic yield on neuroimaging was seen among patients presenting with sudden severe headache, vomiting, or neurological symptoms - reinforcing the role of red-flag screening in deciding who needs imaging.

Early detection of secondary causes through appropriately targeted imaging improves treatment outcomes and reduces the impact of chronic headache on daily functioning.

CONCLUSION

- Chronic headache is a complex condition that requires a comprehensive diagnostic approach.
- Primary chronic headaches are typically diagnosed on clinical grounds based on symptom pattern.
- Secondary headache causes require prompt imaging to identify underlying structural or vascular abnormalities, particularly in the presence of red-flag features.

Declaration Of Originality

I hereby declare that this study, titled 'Deciphering Chronic Headache - The Clinical and Radiological Landscape', is my original work. All sources and references have been appropriately acknowledged, and no part of this work has been plagiarised from any other source. I affirm that this study has not been submitted to any other institution or organisation for academic credit or publication. - Dr. Unushah Hasib

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