



**ORIGINAL RESEARCH PAPER**

**Medicine**

**STUDY OF CLINICAL PROFILE OF PRIMARY HEADACHE DISORDERS AT TERTIARY CARE CENTRE IN SOUTH WEST RAJASTHAN**

**KEY WORDS:** Tension Type Headache, Year Lost To Disability

**Dr Nadeem Zafar Rahmani\*** Postgraduate Student, Department of General Medicine, Pacific Institute of Medical Sciences, Udaipur, Rajasthan \*Corresponding Author

**Dr Bakul Gupta** Associate Professor, Department of General Medicine, Pacific Institute of Medical Sciences, Udaipur, Rajasthan

**Dr Pushpraj Anand** Postgraduate Student, Department of General Medicine, Pacific Institute of Medical Sciences, Udaipur, Rajasthan

**ABSTRACT**

Globally headache is responsible for more disability than any other neurological problem. Migraine is a neurobiological headache disorder that is caused by increased excitability of the CNS. During the menstrual cycle females are more vulnerable to migraine. Headache can be initiated or amplified by various triggering factors like light, glare, exertions, lack or excess sleep, alcohol or other chemical stimulations like drugs. Tension-type headache (TTH) is usually used to describe a chronic head-pain syndrome characterized by bilateral tight, band-like discomfort. A global Study conducted on Burden of Diseases, in 2013, shows that migraine has become the sixth highest cause worldwide of years lost due to disability (YLD) whereas Headache disorders collectively were third highest.

**INTRODUCTION**

Headache is the most common complaint of the civilized human species worldwide. It has the dubious distinction of being the earliest recognized symptom of a wide spectrum of diseases. It has the dubious distinction of being the earliest recognized symptom of a wide spectrum of diseases. Migraine is a neurobiological headache disorder that is caused by increased excitability of the CNS.<sup>1</sup> Headache can be initiated or amplified by various triggering factors like light, glare, exertions, lack or excess sleep, alcohol or other chemical stimulations like drugs.<sup>2</sup> It affects patient's quality of life and impairs work, social activities, and family life. Psychological factors may also play an important role in chronification of headaches<sup>3</sup>.

Tension-type headache (TTH) is usually used to describe a chronic head pain syndrome characterized by bilateral tight, band-like discomfort. The pain is typically slow onset, severity varies and may persist continuously for many days. The headache may be episodic or chronic.<sup>3</sup> Disease burden is measured in YLDs (years lost due to disability) which is calculated from prevalence and average time spent with headache multiplied by disability weight<sup>6</sup>. The burden increases from medication overuse headache.<sup>4</sup> Effective first-line treatment for mild to moderate migraine are non-steroidal anti-inflammatory drugs (NSAIDs) and combination of analgesics containing paracetamol, aspirin, and caffeine. Triptans are the first-line drugs used for the therapies of moderate to severe migraine. Triptans should not be given in patients with vascular disease, uncontrolled hypertension, cerebral ischemia or hemiplegic migraine.<sup>7</sup> The study of Neurological (demographic factors & headache characteristics), Neurosurgical (Tumour headache), Neuropsychological (anxiety, depression & stress) clinical aspects of headache can address a number of important concerns: the true scope of the problem, the distribution of the disorder (who is affected), disability, the current patterns, diagnosis and treatment, the most effective strategies to improve diagnosis and the treatment, risk factors, and health care interventions.<sup>8</sup> Neuroimaging is not always necessary to confirm a distinct headache diagnosis. In order to make a responsible clinical and economically affordable decision to the patient, it is important to differentiate between a primary headache and secondary headache disorders, which are often associated with brain pathology.<sup>9</sup> There is no definitive data about the prevalence of various headache types from our hospital which is a major tertiary care referral centre of southern part of Rajasthan, India. We aimed to determine the

study to prevalence of primary headache, its symptom profile, and pattern of health care utilization at a tertiary care institution, using the operational diagnostic criteria of the International Headache Society (IHS)<sup>10</sup>.

**AIMS & OBJECTIVES**

**AIM OF THE STUDY**

To assess the clinical profile of primary headache disorders.

**OBJECTIVES**

- To study the clinical features of primary headache disorders.
- To classify the type of primary headache disorders in patients presenting at the tertiary care centre.
- To determine the various aggravating factors that may affect prognosis.

**METHODOLOGY**

**Study Design** -prospective observational study.

**Study Place**- OPD and IPD patients in medicine department, in pacific institute of medical science and hospital with the chief complain of headache.

**Study Duration** - 1<sup>st</sup> January 2021 to 1<sup>st</sup> January 2023

**Sample Size Calculation**

The formula used for calculation of sample size is

$$n = z\alpha^2 p \cdot q / d^2$$

So, sample size (n) required is 195

Where, n= sample size

z= constant statistical value

p= sample proportion

q= compliment of p

d= precision

**Inclusion Criteria**

- I. Age between 15 to 65 years of both sexes.
- II. Patients with chief complain of headache.
- III. Patients who fulfill ICDH-3 criteria.

**Exclusion Criteria**

- i. Patient presenting with acute critical illness.
- ii. Patients with acute febrile illness.
- iii. Any patients having history of brain surgery.
- iv. Post traumatic headache.
- v. Patients of any psychiatric illness.
- vi. Patient with multiple comorbidities.

vii. Patients who won't give consent.  
viii. Below 15 years of age.

**METHOD**

Patients CT SCAN or MRI was done to rule out any neurological illness. A detailed history was taken, blood pressure measurement and vitals recording were done. A detailed physical examination including that of central nervous system, ophthalmic examination, ENT examination were done.

**Ethical Consideration**

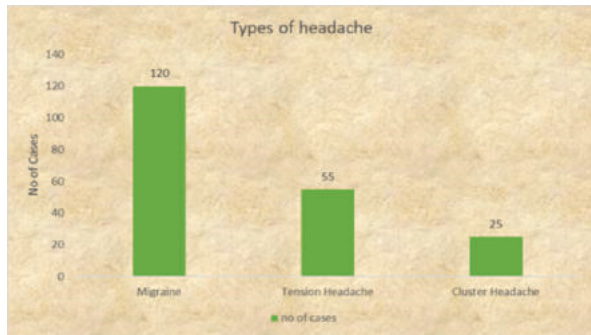
The study was approved by institutional ethical committee of the institute. Written informed consent was taken prior to the study of each participant.

**Data Collection And Analysis**

Data was collected by case record form and entered into MS EXCEL 2016. Data analysis was done in SPSS Software version 26.

**RESULT**

The present study was conducted to analyse the demographic factors, headache characteristics and neuro-psychological factors in primary headache patients. A sample of 200 patients were studied, with primary headache based on IHS criteria. Primary headache patients were sub-classified into migraine, tension headache and cluster headache.



In the present study Nearly 60% of primary headache patients suffer from migraine, about 27.5% suffer from tension headache, and the remaining 12.5% suffer from cluster headache. The prevalence of headache was more common in female (59%) as compared to male (41%).

In the present study the migraine type headache was more common in female as compared to male (male 38.3%, and female 61.66%). Also, the migraine headache was found to be more common among female than male (male to female ratio of 1:1.1).

The peak prevalence of headache in the present study was seen in 15 to 25 years age group, accounting for 24% of the total primary headache cases. The prevalence in the age group in 26 to 35 years is 19%, 36-45 years is 20%, 46-55 years is 18% and >56 years is 18%.

Headache was found to be more common in married patients (75%) as compared to unmarried patients (25%).

Primary headache patients with co-morbid condition, 12.5% had hypertension (males 60%, females 40%), followed by hypothyroidism were 5%. 82% patients do not show any co-morbid condition with primary headache.

In the present study, the most common headache type among primary headache was migraine type headache (60%) and second most common type was tension type headache (27.5%).

In the present study, the most common type of pain was

throbbing in 62% of the patients while 14.5% patients had pricking pain.

In the present study, the intensity of pain of headache was moderate in 63% of patients, while it was severe in 27% of the patients and mild in 10% of the patients.

In the present study nausea was an associated symptom in 67% of patients with migraine type headache and 27% patients with tension headache, vomiting was associated with 45.45% of each patient with tension headache and migraine headache while photophobia was associated with 70.37% of patients with migraine headache and 22.22% each in tension type & cluster headache.

**DISCUSSION**

In the present study, of the 200 patients with primary headache, 59% were females and 41% were males. This indicates a significant female preponderance of primary headache and is consistent with findings of previous study by Stewart W F et al., (1992) , this pattern of headache is explained by the triggering of migraine by fluctuation in female by gonadal hormones especially with respect to oestrogen levels.<sup>11</sup> Headache is common in married women and those living in nuclear families consistent with studies conducted by Manzoni et al.<sup>12</sup> Gender bias was studied in all three types of headaches. Females were more affected than males in all the three types with females representing 61.66% in migraine, 56.36% each in tension headache and 52% in cluster headache. Males were less likely to be affected by all the three types of headaches with 38.34% in migraine, 43.34% each in tension headache and 48% in cluster headache.

Among the patients studied on primary headache, primary headache was predominantly common in younger individuals (24%) in the age group of 15 to 25 years followed by patients in 26-35 years age group (19%). It was less common in the elderly group. Regrouping the patients of primary headache, those with age 45 years is 34% in migraine, 20% of tension type and 16% of cluster type. This indicates that primary headache is common in younger individuals and more so the likelihood of having primary headache after the age of 45 years is less than one among three to four individuals with headache. This is consistent with the findings noted in a study in 2011 by Anne Macgregor et al. Out of the 120 patients with migraine, 66% were in the age group of 45 or less and 34% above the age of 45 years. According to Schwaiger et al, 2008 134, the attack of migraine ceased between ages 40-59. Since the significance values are less than 0.05, it can be concluded that all three types of headaches are prevalent in <45 years age group.

While studying the quality of primary headache in the study population, 62% were having throbbing quality followed by pricking headache with 14%. All the three types of headaches are strongly associated with quality. Throbbing was more prevalent in migraine type of primary headache. Migraine usually starts as a dull ache, but may become throbbing as the intensity increases.

All the three types of headaches is associated with intensity of headache. Moderate intensity of headache was found to be higher in all three types of headaches, with 63% in migraine, 56% in tension headache and 52% in cluster headache.

**REFERENCES**

1. Alvarez WC et al, Was there sick headache in 3000 B.C., Gastroenterology 1945;5:524.
2. McHenry, L.C.Jr.et al, Garrison's history of neurology. Spring field, IL: Charles C Thomas; 1969.
3. Chand D. The Atharvaveda et al, (Sanskrit text with English translation). New Delhi: Munshiram Manoharlal; 1982.
4. Critchley M. et al, Migraine from Cappadocia to Queen Square. In: Background to migraine. London: Heinemann; 1967:p.28-38 (Vol 1).
5. Adam F. et al, The seven books of Paulus Aeginata. London: Sydenham Society; 1844. p. 350.
6. Riley HA. Et al, Special article: Migraine. Bull Neurol Inst, NY 1932;2:429-544.

7. Living E, London J, Churchill A. et al, Migraine, sick-headache and disorders: a contribution in the pathology of nerve-storms; 1873.
8. Schiller F.etal, The migraine tradition. Bull Hist Med 1975; 49:1-19.
9. Headache Classification Subcommittee of the International Headache Society. The International Classification of Headache Disorders, 2nd edition. Cephalalgia 2004; 4 (Suppl 1):1-160.
10. Adhoc Committee on Classification of Headache of the National Institute of Health. Classification of headache. JAMA 1962; 179:717-718.
11. Drummond PD, Lance JW. Clinical diagnosis and computer analysis of headache symptoms. J Neurol Neurosurg Psychiatry 1984; 47:128-133.
12. Rasmussen BK, Jensen R, Olesen J. et al, A population-based analysis of the diagnostic criteria of the International Headache Society. Cephalalgia 1991; 11:129-34.