Original Research Article

Clinical Profile of Headaches among Patients attending Government Medical College & Hospital, Cuddalore

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Abstract:

Background: The prevalence of chronic and frequent headache in general population is around 4% worldwide. Physical disorders, which are characterized by recurrent headache, are associated with personal and societal burdens of pain, disability, decreased quality of life, and financial burden. This vulnerable group of patients are often overlooked among the wide range of patients attending the outpatient department. Identifying and analysing patients with headache is difficult but essential in studying the wide spectrum of this disease. This study aims to highlight the factors responsible for headache which may be a symptom that reveals a serious underlying disorder. **Aim:** To assess the clinical profile of headache in patients attending a tertiary care center. **Materials and Methods:** This study was conducted in the Medicine Outpatient Department of Government medical college after obtaining institutional ethical committee clearance, involving 100 patients of both gender attending the headache clinic of Department of general medicine (OP& IP), of Government Medical college and Hospital.A detailed history and physical examination including that of central nervous system, ophthalmic and ENT examination was done for all patients. The data was recorded and analysed. **Results:** The distribution of patients in different age groups were $\leq$20 years is 7%, 31 to 40 years is 17%, 41-50 years is 14%, 51-60 years is 10% and $\geq$60 years is 10% .In the present study, among the primary headache types, the prevalence of migraine headache was 41.6% and that of tension type headache was 58.4%.The common triggering factors for migraine with/without aura were fasting, stress, menstruation, inadequate sleep, and hunger. Occurrence of migraine may be influenced by menstruation, pregnancy, and hormonal therapies in females. Nausea, vomiting, photo-phonophobia, and neck pain were the most common accompanying symptoms in headache patients in our study. Most of the study participants had a history of addiction to pan (betel). **Conclusion:** The study showed higher rates of headache in females than male patients and primary headache being more common than secondary headache. Severity of symptoms in primary headaches, especially migraine, can be prevented by proper prophylaxis.

Key words: clinical profile, headache, migraine

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Introduction :

Headache is one of the most common complaints for which patients seek medical attention, on a global basis. It produces more disability than many other neurologic problems. Headache occurs in all age groups. Diagnosis and management are based on a careful clinical approach augmented by an understanding of the anatomy, physiology and

pharmacology of the nervous system pathways mediating the pain mechanism.

The prevalence of chronic and frequent headache in general population is around 4% worldwide.[1] Around 76% of women and 57% of men report at least one episode of significant headache per month, and more than 90% of population experience at least one noteworthy episode of headache in their lifetime. The relatively high prevalence of headache together with a low quality of life indicates that chronic headache is a serious health problem.

Almost all patients start with episodic headache which are of tension type or migraine type of headache and gradually becomes more frequent until it occurs almost daily. Psychological factors may also play an important role in the chronicity of headaches.

The International Headache Society classifies Headache as Primary or Secondary.[2] Primary headaches are those in which headache and its associated features are the disorder in itself. Secondary headaches are those caused by any other exogenous disorders.[3]

Common types of primary headache include Tension type headache, Migraine headache, Cluster headache, Idiopathic stabbing headache, Exertional headache and others. Common causes of secondary headache include systemic infections, head injury, vascular disorders, subarachnoid hemorrhage, brain tumor, others. This study is conducted to evaluate the clinical profile of headache in patients attending a tertiary care center.

Aim & Objectives:

- To assess the clinical profile of headache in patients presenting at the tertiary care center.
- To identify the underlying cause of headache (primary or secondary)
- To analyse various demographic factors among headache patients

Materials and Methods:

Study design:

This hospital based descriptive cross-sectional study was conducted in the Medicine Department Government Medical College and Hospital, Tamil Nadu, India following approval from the Institutional Ethics Committee. Sample size was calculated to be 100 for cross-sectional study. A purposive sampling technique was used to recruit participants who fulfilled the inclusion criteria, which included patients with headaches as primary complaint of both gender and above 18 years of age, either attending outpatient care or admitted as inpatient in the department of General medicine. After obtaining an informed consent a detailed history was taken, blood pressure and other vitals were recorded. A detailed physical examination including that of central nervous system, ophthalmic examination and ENT examination was done. Patients with known psychiatric illness, stroke, fever, sinusitis, or other significant co-morbidities were excluded from the study. Data collected was analyzed by frequency, percentage, mean, standard deviation and chi-square test.

Results:

In the present study of clinical profile of headache, 100 patients who presented with the complaint of headache at the outpatient department or were admitted in the inpatient department of our tertiary care center were selected and studied over a period of one year.

The various observations made are described as follows.

Table 1: Genderwise distribution of headache among study population

Gender	Number of patients(n=100)	Percentage
Male	36	36%
Female	64	64%
Total	100	
Male:Female Ratio	1:1.78	

Graph 1: Genderwise distribution of headache among study population

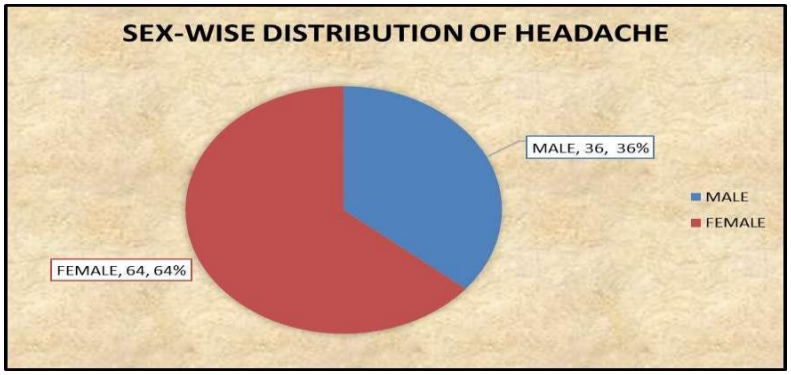
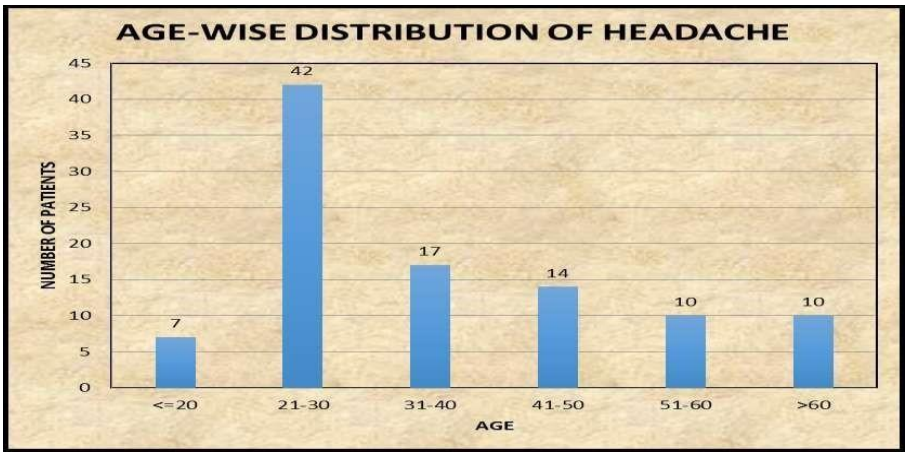


Table 2: Distribution of headache among various age groups

Age (years)	Number of patients	Percentage
<=20	7	7%
21-30	42	42%
31-40	17	17%
41-50	14	14%
51-60	10	10%
>60	10	10%
Total -	100	

Graph 2: Age-wise distribution of headache

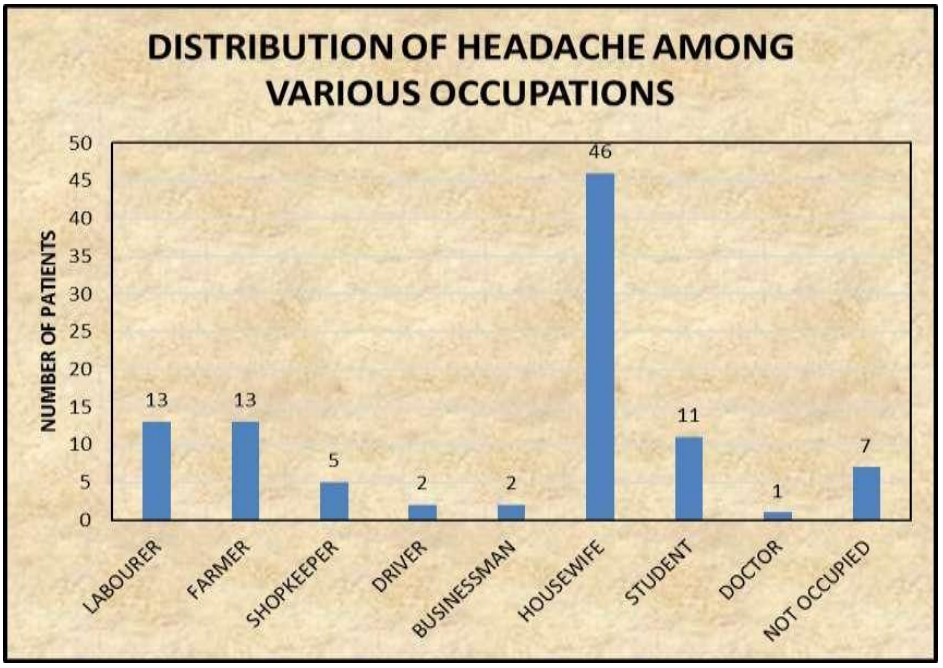


The peak prevalence of headache in the present study of 100 cases is seen in 21 to 30 years age group, accounting for 42% of the total cases. The prevalence in the age group of 20 years and less is 7%, in 31 to 40 years is 17%, 41-50 years is 14%, 51-60 years is 10% and 60 years or more is 10%.

Table 3: Distribution of headache among various occupations

Occupation	No of Patients
Housewife	46
Labourer	13
Farmer	13
Student	11
Shopkeeper	5
Driver	2
Businessman	2
Doctor	1
Not occupied	7
Total	100

Graph 3: Distribution of head ache among various occupations

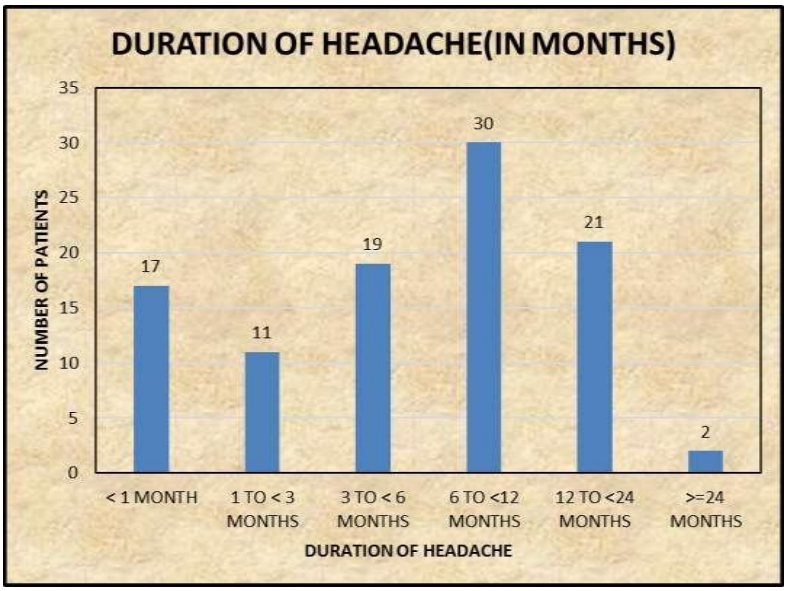


In the present study the prevalence of headache was maximum among housewives accounting for 46% of total patients, followed by laborers (13%), farmers (13%) and students (11%).

Table 4: Duration of headache (in months)

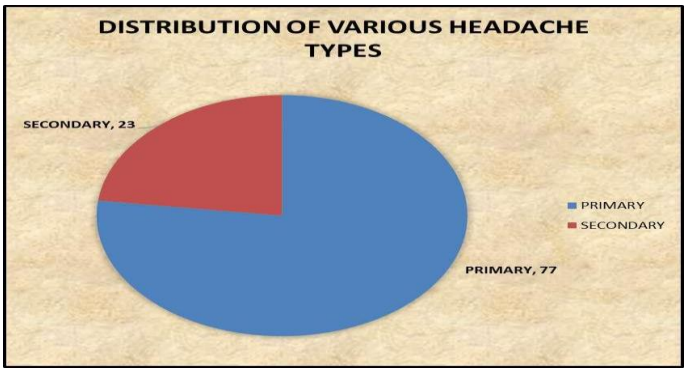
Duration of symptoms (months)	No of patients
< 1 MONTH	17
1 to < 3 MONTHS	11
3 to< 6 MONTHS	19
6 to <12 MONTHS	30
12 to < 24 MONTHS	21
≥24 MONTHS	2
TOTAL	100

Graph 3: Duration of headache (in months)

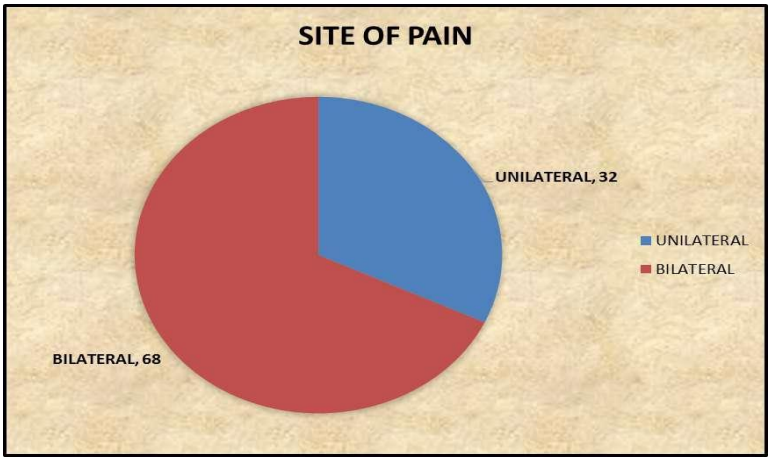


In the present study maximum patients (30%) had their symptom duration between 6 to 12 months.

Graph 5: Distribution of various headache types

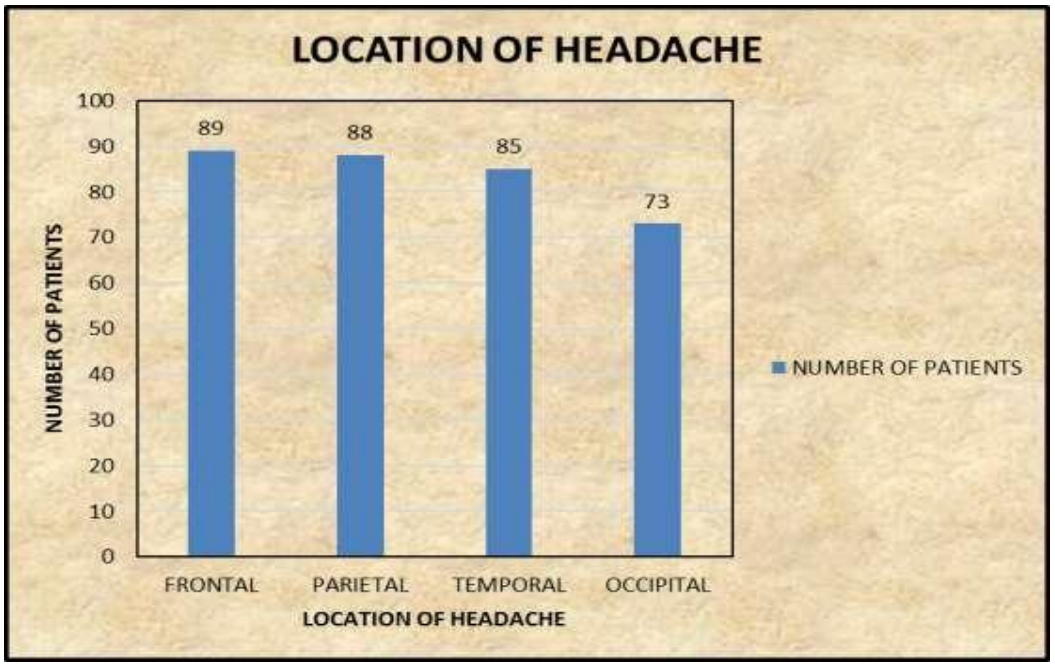


Graph 6: Site of pain



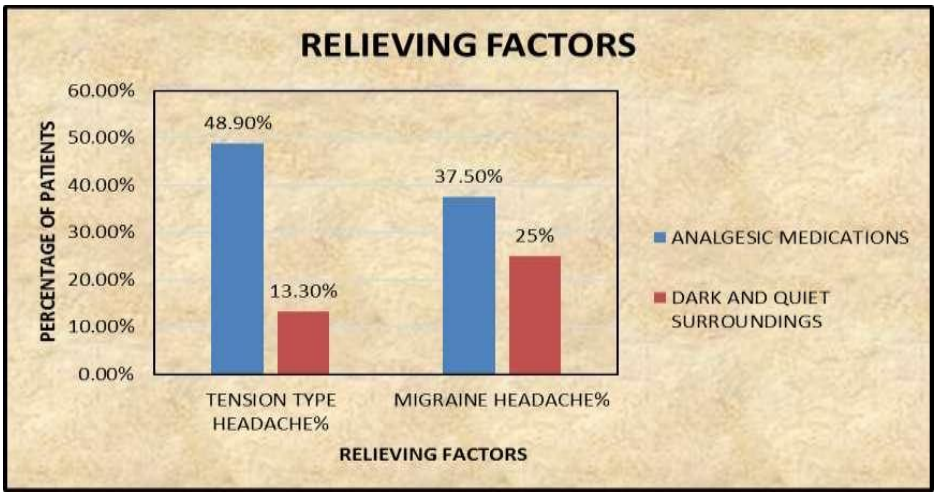
In the present study among 100 patients, prevalence of primary headache was 77%, while that of secondary headache was 23%&, 68% patients had bilateral headache, while 32% patients had unilateral headache.

Graph 6: Location of the headache among the patients



In the present study, 89% patients had headache involving frontal region, 88% involved parietal region, 89% involved temporal region and 73% involved occipital region.

Graph 7: Relieving factors in different headaches



Discussion:

Headache is a very common complaint of the patients attending the tertiary care center. In the present study, the clinical profile of 100 patients presenting with the complaint of headache at the tertiary care center has been studied. Amongst the 100 patients, 36% patients were male and 64% patients were female, these observations were similar to many other studies carried out in different decades in our country.[4,5,8-10] In our study, prevalence was more among women especially housewives (46%) suggesting an impact of lifestyle and stress factors related to domestic responsibilities similar to study by Shyfullah et al.[14]

The prevalence in the age group of 20 years and less is 7%, in 31 to 40 years is 17%, 41-50 years is 14%, 51-60 years is 10% and 60 years or more is 10%. These observations were similar to many other studies carried out at different times.[5-9] The peak prevalence of headache is seen in 21 to 30 years age group, accounting for 42% of the total cases. Studies by Chakravarthy et al and Ravi et al showed more predominance among the age group 20 – 40 years.[8-10] The prevalence of primary headache was more amounting to 77%, compared to secondary headache of 23% similar to study by Senthil et al.[7] Senthil et al study showed that out of 100 patients with Chronic headache, primary headache was the predominant type accounting for 82% as compared to Secondary headache seen only in 18%[7]. AP Jain et al showed primary headache as the predominant type with a prevalence of 92.5% and remaining 7.5% with secondary headache.[5] This in contrast to the study where 19.5% patients had primary headache whereas the percentage of secondary headache was (27%) and higher.[10-12] These studies were conducted in China, Greece, Italy where the health-care system permits patients to visit a medical center without referral from basic medical units and all patients were self-referred.

It can often be difficult to distinguish between primary and secondary headaches, particularly in cases of acute headache and in patients aged more than 50 years. Study by Guerrero AL et al has suggested that headache patients older than 50 years have a fourfold higher risk of having headache secondary to another predisposing condition.[13] Our study showed that primary headache was more common. In the present study maximum patients (30%) had their symptom duration between 6 to 12 months. In the present study the most common site of pain was bilateral in 68% of patients, while 32% patients had

unilateral headache. The present study shows that there is a higher incidence of chronic headaches, indicating that conditions such as chronic migraine and chronic tension-type headaches are prevalent in this demographic. This is in similar to previous study by Shyfullah et al.[14] This finding is concerning, as chronic headaches are known to adversely affect productivity and overall well-being.

Most of the study fails to focus the site and location of headache which helps in assessing the cause of headache. Our study also focused on the site and location of headache, which emphasizes the significance of early diagnosis and intervention. In the present study the most common site of pain was bilateral in 68% of patients, while 32% patients had unilateral headache. In the present study, 89% patients had headache involving frontal region, 88% involving parietal region, 89% involving temporal region and 73% involving occipital region.

Also, our study emphasizes on the predisposing factors which helps to provide health care even at primordial level. The clinical characteristics and headache patterns identified in this study underscore the diversity and intricacy of headache disorders. The predominance of females, the youthful population, and elevated rates of chronic headaches highlight the significance of primary headache disorders, specifically migraines and tension-type headaches, as major public health issues. The common triggering factors for migraine with/without aura were fasting, stress, menstruation, inadequate sleep, and hunger. Occurrence of migraine may be influenced by menstruation, pregnancy, and hormonal therapies in females. Nausea, vomiting, photo-phonophobia, and neck pain were the most common accompanying symptoms in headache patients in our study. Most of the study participants had a history of addiction to pan (betel). Further studies into the etiology of headache, along with targeted interventions, is essential to alleviate the impact of this common neurological condition.

Conclusion:

Our study reveals a significant prevalence of headache disorders in young adults, especially women, with frequent continuous headaches and associated symptoms. The results indicate that primary headache disorders, mainly migraines and tension-type headaches, constitute significant health issues necessitating focused intervention. A multidisciplinary strategy in the diagnosis and management is essential to enhance patient outcomes and mitigate the daily impact of headaches. Severity of symptoms in primary headaches, especially migraine, can be prevented by proper prophylaxis.

Limitations:

The present study has several methodological limitations. First, because this is a hospital-based survey, the data cannot be used to estimate the prevalence of primary headaches in the general population. We did not evaluate the impact of the patient's condition on their work, household and social activities, and such factors should be taken into consideration when evaluating the wider impact of headache. Future studies to be carried out focusing on identifying the risk factors and creating effective prevention and treatment methodologies.

Acknowledgements: Nil

Conflict of interest: Nil

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