

CLINICAL PROFILE OF HEADACHE FROM A TERTIARY CARE CENTRE IN EASTERN INDIA

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ABSTRACT

Background and Purpose

Headache is one of the commonest disorders presenting to the neurologists and causes significant morbidity. There is no definitive data about the prevalence and clinical profile of various headache types from our hospital which is a tertiary care referral centre for eastern India. The present study was conducted to study the etiological and clinical profile of various headache types using the second edition of International Classification of Headache Disorders (ICHD-2), and associated triggers in a tertiary care referral centre.

Patients & Method

It's a retrospective study. Two thousand and forty three patients presenting with chief complaints of headache or facial pain to the Neurology Department at the Institute of Medical Sciences, Banaras Hindu University, Varanasi, India between September 2005 and August 2008 were enrolled.

Results

Migraine was the commonest headache type (46%), followed by tension type headache (31.7%). In the migraine group migraine without aura (56%) was the commonest followed by chronic migraine (31%) and migraine with aura (10.5%). Chronic tension type headache (74%) followed by frequent episodic tension type headache (ETTH) was seen in the tension type headache (TTH) group. Females were affected more in migraine (M: F = 1:2.6) and tension type headache (M:F=1:2) group while in cluster headache (M:F=4:1) and trigeminal neuralgias (M:F = 1.2:1) males were affected more.

Conclusions

Migraine including chronic migraine was the most common headache type followed by Chronic TTH. Stress was found as the most common precipitating factor followed by fasting.

KEYWORDS: Chronic Migraine, Chronic Tension Type Headache (CTTH), Episodic Tension Type Headache (ETTH), Cluster Headache, Trigeminal Neuralgias

INTRODUCTION

Headache is the most common disorder encountered in general clinical practice. Headache is a heterogeneous condition that varies widely with respect to global severity and severity of individual attacks. Among the primary headaches, it has been seen that tension type headache is commonest type of headache encountered all over the world

although there are global variations¹. As in other parts of world, in Eastern India too, headache is one of the commonest presenting neurological complaints in the Neurology out-patient department. There is no definitive data about the prevalence of various headache types from our hospital which is a major tertiary care referral centre for eastern India. The present study designed to study the clinical profile and to classify the various headache types according to the second edition of International Classification of Headache Disorders (ICHD-2)².

PATIENTS AND METHODS

Present study was conducted in the Department of Neurology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India which a tertiary care referral centre in eastern India over a three year period from September 2005 to August 2008. All patients presenting to neurology outpatient department with chief complaints of headache or facial pain were included. Detailed history was taken and necessary clinical examination was carried out in all patients. Relevant investigations including a hemogram, cerebrospinal fluid analysis including manometry and brain imaging (CT scan, MRI) were done wherever indicated. After thorough history, clinical examination and appropriate investigations, final diagnoses were made, strictly following the criteria proposed by International Classification of Headache Disorders, 2nd edition. A total of 2043 were enrolled in our study.

RESULTS

Out of 2043 cases, 939(46%) cases were diagnosed as having migraine and 648 (31.7%) cases as tension type headache followed by New Daily Persistent Headache (NDPH) 20(1%) cases, Cluster headache 10 (0.5%) cases, Hemicrania Continua 9(0.4%) cases and 3(0.15%) cases of Idiopathic Stabbing headache. Headaches associated with intracranial neoplasms, post traumatic headache, sinusitis, cervicogenic headache, medication overuse headache, headache associated with meningitis and idiopathic intracranial hypertension were found in 81 (4%), 57 (2.8%), 48 (2.3%), 36 (1.8%), 21 (1%), 15(0.7%) and 9 (0.4%) cases respectively. Facial pain was found in 39 (1.9%) cases and cranial neuralgia in 69 (3.4%) cases. [Table-1]. Headache remained unclassified in 39 (1.9%) patients.

Among the migraneurs, 525(56%) patients were diagnosed as Migraine without aura while 99 patients (10.5%) had Migraine with aura. Two ninety one (31%) patients came under the category of chronic migraine while 18(1.9%) patients had probable migraine without aura. Six patients were diagnosed as having typical aura without migrainous headache. Dyspeptic symptoms (flatulence dyspepsia, bloating sensation and pain in epigastrium) and diarrhea were commoner in migraine patients than TTH patients (52% vs. 2.8%) and (39% vs 12.5) patients. Among the tension type headache category chronic tension type headache comprised the majority 480 (74%) while 168 (26%) patients were diagnosed having frequent episodic tension type headache.

Male: Female ratio was 1:2.6 in migraine patients and 1:2 in tension type headache patients. Majority of the studies^{5,6} have also reported a female preponderance in migraine as well as in TTH. In Cluster headache and Trigeminal neuralgia it was 4:1 and 1.2:1 respectively.

Median age at presentation for migraine and tension type headache was 27years (range 6-48) and 25 years (range14-60) respectively. This was higher for cluster headache- 35 years (range 28-53) and trigeminal neuralgia-43.5years (range 38-72). Among the TTH, both the groups had similar median age of presentation i.e. 25 years [Table2]. Thus the majority of patients with migraine and TTH presenting to our OPD were in their 3rd decade which is consistent with the reported peak incidence of migraine in the second and third decades¹.

Rural preponderance was observed amongst the migraine patients with 582 (62%) patients hailing from rural areas

and 357 patients (38%) from urban area. Contrary to this in TTH category 337 (52%) being urban and 311 (48%) were from rural area respectively. Increased incidence of urban patients having TTH (48% in TTH as compared to 38% in Migraine) may possibly be due to increased stress and pollution in the cities.

Housewives formed the vast majority in both migraine and TTH (55% vs 52%), followed by students (36% vs 32%) [Table 3]. A positive family history was seen in 244 migraine patients (26%) and in none with TTH. Neuroimaging (CT/MRI) was carried out in 150 patients of migraine and 60 patients of TTH. A single ring enhancing lesion was seen in 9 patients, with 6 being in the parietal lobe and 9 in frontal lobe.

In the present study, fasting was found to be the most common trigger (32%) for migraine, probably related to the common Indian tradition of fasting during festivals whereas stress (emotional as well physical) being the second commonest trigger (31%) for migraine and the most common for TTH (20%). Menstruation (15%), cheese (2.9%), coke (1.3%), cold air (0.95%) and fried food (0.95%) were exclusively related to migraine. [Table 4].

DISCUSSIONS

One of the major improvements in ICHD-II was the revised and more specific criteria for chronic migraine, probable and medication overuse headache (MOH) subcategories. Tension type headache has been observed in higher prevalence than migraine in most of the population based studies¹. However in hospital based studies reported from India, prevalence of migraine and TTH patients has been variable. In cases of migraine it ranges from 13.6% to 78%^{3,4}. In our study migraine is the most prevalent type of headache, found in 46% cases including chronic migraine followed by tension type headache in 31.7% cases. Variation in the prevalence of migraine among studies is largely due to differences in case definition and in the age and gender distribution of study populations⁵. Total 39.2% patients categorized under chronic daily headache (CDH) subcategory. Chronic migraine has been the new entity in the 2nd edition of international classification of headache disorders and a new diagnosis for those patients who fulfill the diagnostic criteria for migraine for 15 or more days per month for three months or more without history of medication overuse. Two ninety one patients, (31%) fulfilled the criteria for chronic migraine which is remarkable. In another hospital based study from India showed that chronic migraine/ transformed migraine was most common (82.4%) form of chronic daily headache⁶.

Approximately 18% of women and 6% of men in United States are plagued by migraine, and 15% to 30% experience an aura with some migraine attacks⁵. In the various Asian studies⁷ prevalence of migraine was found to be 11.3% to 14.4% in women and 3.6% to 6.7% in men. In the present study 99 patients, (10.5%) had migraine with aura, which is less as compared to the West.

Tension type headache which is 2nd most common headache in our study (31.7%), out of which chronic TTH patients were 74% while 26% patients were diagnosed having frequent episodic TTH. Prevalence of chronic TTH is high in our study which is in correspondence with other study⁸. The prevalence of tension-type headache has also been similar among Asian studies (15.6% to 25.7%)⁷. Female preponderance was less pronounced than for migraine (1:2.6 vs.1:2).

Other primary headaches include Cluster headache, Hemicrania continua and Primary stabbing headache (0.5%, 0.4% and 0.15% respectively) which is in corresponds to another population based study⁸. Diagnosis of NDPH was made in 20 cases (1%). These cases had daily headache from the onset and fulfilled other criteria by International Headache Society (ICHD-2). Cerebrospinal fluid pressure was normal in these cases and other secondary causes (like viral infection) were ruled out by appropriate investigation. In our study Trigeminal neuralgia was found to be 2.9% (1.3% post herpetic neuralgia and 1.6% as classical trigeminal neuralgia) which is much higher than other studies^{8,9}.

Stress is the most commonly reported trigger of migraine headache. Population based and subspecialty clinic based studies have reported that a stressful event or situation was trigger of migraine headache in 36% to 42% and 62% to 72%^{10,11}. Fasting has been reported as a migraine trigger by 56% in one population based study and by 40% to 45% in subspecialty clinic based studies.^{11,12} Fasting can induce headache by alteration in levels of serotonin and nor-epinephrine in brainstem modulatory pathways¹³ or by releasing stress hormones (corticotrophin releasing factor and cortisol). Triggers are same for India and abroad but incidence varies due to different life style and food habits

CONCLUSIONS

The present study thus documents the clinical profile of headache in the Eastern part of India according to ICHD-2 classification. Migraine including chronic migraine was found as the most common headache disorder followed by TTH. Stress has been found to be the most common trigger for migraine however fasting; menstruation, cheese, coke, cold air and fried food were found triggers exclusively for migraine.

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APPENDICES

Table 1: Showing Various Etiological Groups of Headache Patients

Type	No. (%)	Male	Female	Ratio (M:F)
Primary Headache				
Migraine	939 (46)	258	681	1:2.64
Tension type headache	648 (31)	204	423	1:2.07
Cluster	10 (0.5)	8	2	4:1
NDPH	20 (1.0)	8	12	1:1.5
Hemi crania continua	9 (0.4)	6	3	2:1
Primary stabbing headache	3 (0.15)	3	0	
Secondary Headache				
Idiopathic intracranial hypertension	9 (0.4)	0	9	
Intracranial neoplasm	81 (4)	60	21	2.85:1
Sinusitis	48 (2.3)	30	18	1.66:1
Cervicogenic headache	36 (1.8)	21	15	1.4:1
Post-traumatic headache	57 (2.8)	33	24	1.37:1
Medication Overuse Headache	21 (1)	9	12	1.33:1
Intracranial infection	15 (0.7)	9	6	1.5:1
Neuralgias and Central and Primary Facial Pain				
Trigeminal neuralgia	33 (1.6)	18	15	1.2: 1
Post-herpetic neuralgia	27 (1.3)	15	12	1.25:1
Tolosa-Hunt syndrome	9 (0.4)	6	3	2:1
Primary facial pain	39 (1.9)	30	9	3.33:1
Unclassified Headache				
Unclassified	39 (1.9)	21	18	1.16:1

Table 2: Showing Median Age of Presentation in Various Types of Migraine and TTH

Type	Median Age of Presentation (Years)	Range
Migraine	27	6 to 48
Migraine without aura	28	6 to 47
Migraine with aura	27	14 to 48
Chronic migraine	30	14 to 45
TTH (Chronic & Episodic)	25	14 to 60
Cluster Headache	35	28 to 53
Trigeminal Neuralgia	43.5	38 to 72

Table 3: Showing Occupation of Headache Patients

Type	No.	Business	Housewife	Employee	Student	Others
Migraine	939	42	516	27	338	16
TTH	648	27	336	24	207	54

Table 4: Triggers in Migraine and TTH

Triggers	Migraine	TTH
Emotional stress	123	84
Physical stress	168	45
Fast	303	24
Sleep irregularities.	120	27
Menstrual cycle	141	0
Cheese	27	0
Coke	12	0
Cold air	9	0
Sun	27	27
Fried food	9	0

