



“Diagnosis And Management Of The Primary Headache Patients In Private Care Hospital, Mymensingh, Bangladesh”

Goutam Saha¹

¹Assistant Professor, Dept. Of Neurology, Mymensingh Medical College, Mymensingh, Bangladesh

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ABSTRACT: Background: Headache is an extremely common symptom and collectively headache disorders are among the most common of the nervous system disorders, with a prevalence of 48.9% in the general population. So, it is important health problem. Severe, disabling headache is reported to occur at least annually by 40% people worldwide. The results of the study will help prompt and early diagnosis of headache patients. **Objective:** To find out the Diagnosis and Management of the Primary Headache Patients. **Methods:** This is a prospective observational study. This study was conducted in Private Care Hospital, Mymensingh, Bangladesh from 1st July, 2020 to 31st December, 2020. Sample size is 100. Qualitative purposive sampling has been done. Sample has been selected according to inclusion and exclusion criteria. Proper history taking, thorough physical examination and necessary investigation have been done to find out the etiology of headache. **Results:** In the study mean age of the respondents was 39.8 ± 26.66 (at 95% CI). Male and female ratio was 0.72:1. This study revealed that out of 100 patients 60 patients had Tension type headache (TTH), 11 patients had migraine, 15 patients had mixed cranial headache (MCH), 1 patient to Cluster headache (CH) and 13 patients had secondary headache. It was seen that most patients (87%) suffered from primary headache with TTH being the commonest diagnosis. Females were more affected than male in all groups except secondary headache. 26(43.3%) TTH patients had complaints of migraine. 7(63.6%) respondents of migraine group and daily headache while 25(36.4%) had one or more attack 5(33.3%) respondents of MCH group had one or more in a month. None had been suffered from daily attack of attacks on every month. In terms of character of the pain 30(48.0%) suffers, 9(81.8%) had suffer pulsatile pain. Character of patients of TTH experienced dull pain, while 19(30.4%) pain was more or less evenly distributed in MCH group had compressive. Though these headaches have distinct epidemiologies and clinical phenotypes, there is overlapping response to therapy: non-steroidals, triptans, dihydroergotamine, and the anti-emetic dopamine-antagonists may play a therapeutic role

for each of these acute headaches. Because these headaches often recur over the days and months following ED discharge, the responsibility of the emergency physician includes identifying as yet unmet treatment needs and ensuring successful transition of care of these patients to an outpatient healthcare provider. Herein, we review the diagnostic criteria and management strategies for the primary headache disorders. There was decline in primary headache with advancing age as the number of secondary headaches increased. Investigations were needed in a very small group of patients. **Conclusion:** It is very important to differentiate the different types of headache. Headache disorders as a substantial health problem and the benefit of health care utilization on the quality of life of headache sufferers need to be improved at all levels. Primary headache prevalence is high in our population. It is not recognised as that requiring care by most of the staff of this tertiary health facility; thus education is required to increase health care utilization.

Keywords: Etiological Evaluation, Hypertension, Headache, Migraine.

I INTRODUCTION

Headache is one of the most common neurological disorders [1], and accounts for multiple visits to the general physician and neurologist. Primary headaches cause significant disability with reduced efficiency, quality of life, and lost workdays [1]. Few receive appropriate diagnosis and adequate care. Migraine and tension-type headache are the most prevalent primary headache disorders. The primary headache disorders are a collection of chronic illnesses characterized by repeated acute exacerbations, sometimes warranting an ED visit. The cornerstones of ED management are: 1) to determine the correct headache diagnosis, 2) to exclude secondary causes of headache, such as infection, mass-lesion, or hemorrhage, 3) initiate headache abortive therapy in appropriate cases, 4) provide the patient with an appropriate discharge plan that includes a diagnosis, patient education, prescriptions, and 5) prompt referral to an appropriate health care provider for definitive



management. In this chapter, we review the diagnosis and management of the primary headache disorders, including migraine, tension-type headache, and cluster. In addition, less common primary headache disorders are reviewed. Headaches may be classified as primary or secondary, depending on the underlying cause. Severe, disabling headache is reported to occur as many as 90% individuals have at least one headache per year. Severe, disabling headache is reported to occur at least annually by 40% people worldwide [1]. Secondary headache may be due to structural, infective, inflammatory or vascular conditions, but these are dwelt with elsewhere [2]. So, it is important health problem. As many as 90% individuals have at least one headache per year. Rasmussen et al showed that the lifetime prevalence of headache in general population was 93% for men and 99% for women [3]. The one year prevalence varies in different studies from 23.0 to 90.0% [3]. By contrast, in elderly population, prevalence of headache ranged from 5% to 50% in different studies indicating a decline with age [4, 3]. In fact, the prevalence of primary headaches declines with age; whereas that of secondary headaches increases [5]. In spite of that, primary headaches are the most frequent headaches in elderly and secondary headaches account of no more than 10-20% of headaches diagnosed over 65 years [6]. Headache occur in over 80% of women during their childbearing years [7]. Therefore, they often present during pregnancy. The hormonal changes accompanying the menstrual cycle, pregnancy and postpartum are thought to be responsible [8]. Tension type headache (TTH) is more common than migraine. One study in Italy showed a prevalence of 2.6% for TTH in elderly compared with 1% for migraine. The study with Thai elderly found that the prevalence of TTH and migraine in elderly was 18.3% and 2.9% respectively [9]. Headache is the major cause for attendance in neurological outpatient clinics, representing approximately 15% of routine neurological attendance and reflecting the anxiety amongst both patients and doctors that headache may be due to a sinister cause [9]. Thus every patient with headache requires careful consideration and sometimes thorough investigation [4]. Secondary headache due to CNS diseases, metabolic abnormalities, hypertension, drug induced headache etc. are more frequent in elderly [4]. The first description of a migrainous personality was published by Harold Wolf in 1937 who reported an association between migraine and some psychiatric symptoms. Although this characterization of migrainous adults as obsessive, shy, obedient and with rigid and inflexible traits

has since been abandoned, the concept at that time highlighted a need to investigate correlations between headaches and psychological factors [10, 11]. Epidemiological studies have shown that psychiatric disorders occur more frequently in patients who suffer from recurring headaches [12]. The term chronic daily headache (CDH) covers a group of primary headaches that occur more than fifteen days per month, with duration of a minimum of four hours, over at least three months [13-15]. CDH include chronic migraine (CM), chronic tension-type headache (CTTH), hemicranias continua (HC), and new daily persistent headache (NDPH) [16]. CDHs affect from 3 to 5% of the general population, and account for approximately 40% of resources of clinics specialized in headaches [17].

II METHODOLOGY

This is a prospective observational study. This study was conducted in Private Care Hospital, Mymensingh, Bangladesh from 1st July, 2020 to 31st December, 2020. Sample size is 100. Qualitative purposive sampling has been done. Sample has been selected according to inclusion and exclusion criteria. Proper history taking, thorough physical examination and necessary investigation have been done to find out the etiology of headache.

Inclusion Criteria:

1. Patients presenting with headache patients in Private Care Hospital, Mymensingh, Bangladesh during the study period.
2. Patients over the age of 18 years.
3. Giving informed written consent.

Exclusion Criteria:

1. Age at or below 18 years.
2. Patient not given consent.

Procedure of Data Collection: Detailed history was taken, then thorough clinical examinations, necessary investigations (if needed) for headache was done. All these data was collected by using preformed data sheet. According to the final diagnosis of the patient the headache was identified as primary or secondary. Primary headache was further classified as TTH, migraine, mixed cranial headache (MCH), cluster headache and others. Other than MCH other types were diagnosed as standard protocol. Headache that had mixed features of TTH and migraine were grouped as MCH. Secondary headache were further classified according to the underlying cause.



Statistical Analysis: The statistical analysis was carried out using the Statistical Package for Social Sciences version 20.0 for Windows (SPSS Inc., Chicago, Illinois, USA). Qualitative variables of this study have been expressed as percentage. Quantitative variables are expressed as

mean±standard deviation. Test of significance was performed by unpaired t-test for quantitative variables. A “p” value <0.05 was considered as significant.

III RESULTS

Out of 100 respondents 58(58%) were female and 42(42%) were male. Male and female ratio was 0.72:1. Mean age of the male respondents was 40.3±26.033 (at 95% CI) and mean age of the female respondents was 39.3±26.66 (at 95%CI). Median age was reported 49.5 years. Total mean age of the respondents was 39.8±26.66 (at 95%CI).

As mean age appears to be less than median age for each sex, it indicates that the study population representing headache patients had a predilection towards younger age group, hence having a left skewed distribution [Table-1,2]. 22(22%) respondents had suffered from less than one attack of headache in a month, 49 (49%) had one or more attack in a month and 29(29%) had daily attack [Table-3].

Table-1: Frequency distribution of respondents by sex (N=100)

Sex	Frequency	Percent
Male	42	42
Female	58	58
Total	100	100

Table-2: Statistical distribution of age of the respondents by sex (N=100)

Sex of the respondents	Mean age	Std. deviation	Median age
Male	40.3	13.033	49.5
Female	39.3	10.083	49.5
Total	39.8	11.558	49.5

Table-3: Frequency distribution of the respondents by periodicity of pain (N=100)

Periodicity of pain	Frequency	Percent
One attack in a month	22	22
More than one attacks in a month	49	49
Daily attack	29	29
total	100	100

Table-4: Periodicity of primary type headache (N=87)

Primary headache	Periodicity of pain			Total
	<One attack in a month	One or more attacks in a month	Daily attack	
TTH	9 (15%)	25(41.7%)	26(43.3%)	60(100%)
Migraine	4(36.4%)	7(63.6%)	0(.0%)	11(100%)
MCH	3(17.6%)	5(33.3%)	7(46.7%)	15(100%)
Cluster headache	1(100%)	0(.0%)	0(.0%)	1(100%)
Total	17(19.5%)	37(42.5%)	33(37.9%)	87(100%)

Table-5: Character of headache in primary headache (N=87)

Character of pain	Types of primary Headache				Total
	TTH	Migraine	MCH	Cluster headache	
Pulsatile	3 (5%)	9(81.8%)	2(13.3%)	0(.0%)	14(16.0%)
Pinprick	1(1.6%)	1(9.1%)	1(6.7%)	0(.0%)	3(3.4%)
Tingling	3(5%)	1(9.1%)	6(40.2%)	1(100%)	11(12.6%)



Dull	30(48%)	0(.0%)	2(13.3%)	0(.0%)	32(%)
Penetrating	4(6.4%)	0(.0%)	2(13.3%)	0(.0%)	6(%)
compressive	19(30.4%)	0(.0%)	2(13.3%)	0(.0%)	21(%)
Total	60(100%)	11(100%)	15(100%)	1(100%)	87(100%)

Table-6: Relieving factors of primary headache (N=87)

Primary headache	Relieving factors			
	Drugs	Sleep	Rest	Massage
TTH	49 (81.6%)	11 (18.3%)	4 (6.6%)	6(10.0%)
Migraine	11 (100.0%)	3 (27.27%)	1 (9.1%)	0 (.0%)
MCH	13 (86.8%)	4 (26.6%)	2 (13.3%)	0 (.0%)

Table-7: Co-existing symptoms in primary headache (N=87)

Primary headache	Co-existing symptoms				
	Nausea	Vomiting	Anxiety	Photophobia	Visual disturbance
TTH	12 (20.0%)	1 (1.6%)	47 (78.3%)	3 (5.0%)	4 (6.6%)
Migraine	10 (90.9%)	6 (45.5%)	1 (9.0%)	7 (63.6%)	7 (63.6%)
MCH	10 (66.6%)	2 (13.3%)	9 (60.0%)	8 (53.3%)	3 (20.0%)

Table 8: Migraine medications.

First line	Ibuprofen 400 mg, ASA 1000 mg, naproxen sodium 500–550 mg, acetaminophen 1000 mg
Second line	Triptans: oral sumatriptan 100 mg, rizatriptan 10 mg, almotriptan 12.5 mg, zolmitriptan 2.5 mg, eletriptan 40 mg, frovatriptan 2.5 mg, naratriptan 2.5 mg Subcutaneous sumatriptan 6 mg if the patient is vomiting early in the attack. Consider for attacks resistant to oral triptans Oral wafer: rizatriptan 10 mg or zolmitriptan 2.5 mg if fluid ingestion worsens nausea Nasal spray: zolmitriptan 5 mg or sumatriptan 20 mg if patient is nauseated Antiemetics: domperidone 10 mg or metoclopramide 10 mg for nausea
Third line	Naproxen sodium 500–550 mg in combination with a triptan
Fourth line	Fixed-dose combination analgesics (with codeine if necessary; not recommended for routine use)

26(43.3%) TTH patients had complaints of migraine. 7(63.6%) respondents of migraine group and daily headache while 25(36.4%) had one or more attack 5(33.3%) respondents of MCH group had one or more in a month. None had been suffered from daily attack of attacks on every month [Table-4]. In terms of character of the pain 30(48.0%) suffers, 9(81.8%) had suffer pulsatile pain. Character of patients of TTH experienced dull pain, while 19(30.4%) pain was more or less evenly distributed in MCH group had compressive. By contrast majority of migraine with tingling type being most common (40.2%) [Table-5]. Drugs relieved pain in all migraine sufferers and MCH with 49(81.6%) and 13(86.6%) patients (100%). It was also commonest reliving factor in TTH opting for it respectively [Table-6]. Nausea and vomiting were closely associated with migraine as 10(90.9%) and 5(45.5%) patients with migraine had them respectively. Photophobia and visual disturbance were also predominantly associated with migraine.

47(78.3%) TTH patients had anxiety which was less common in migraine with only 1(9.0%) patients [Table-7].

IV DISCUSSION

Headache burden can be reduced significantly by increasing awareness in the population, timely hospital visits, recognition of precipitating factors, and treatment. Selection of the patients for the study was randomly made irrespective of their sex and education. Headache was mostly diagnosed as clinically and some selective investigations were done for some selective patients. Mean age of the study group respondents was 39.8 years with a standard deviation of ±11.5 years. Median age was reported 49.5 years. Maximum 44 respondents (44%) were within 30-39 years age group. Next highest respondent's age group was 40-49 years with 35(35%) respondents. Out of 100 respondents 58(58%) were female and 42(42%) were male.



Male and female ratio was 0.72:1. In a study on Thai elderly, male to female ratio was 0.8:1 [3]. Chronic migraine is the most prevalent subtype of CDH seen in tertiary care centers [18]. This perhaps justifies why “such psychological abnormalities, often seen in chronic headaches, are frequently interpreted as responses to chronic pain” [19]. In the case of migraine, Bigal and Lipton described it as a chronic disease with progressive and sporadic manifestations. In some people the very process of becoming chronic remains unclear [28,29]. It is believed that progression of migraine leads to changes in the central nervous system that are manifested by changes in nociceptive and pain thresholds, such as central sensitization [22]. The fact that individuals with chronic headache, including migraine, regularly suffer from other comorbidities, indicates the need for studies on the possibility that the same pathophysiological mechanisms explain the two clinical manifestations [23]. A figure similar to the findings of the study was found by Habib M and Solomon Gd. where male to female ratio was 0.5:1 in both cases [25, 26]. Maximum 40 (40 %), respondents had dull type of headache. Second highest group with 24 (24%) respondents had compressive type of headache. 14(14%) had pulsatile type of headache, and 11(11%) had tingling type of headache. According to severity of attack (measured by a severity scale described in appendix B) 45(45%) respondents had mild headache, 35(35%) had moderate and 20 (20%) had severe headache. This findings is similar to the observations of prencipe M [27]. In their study they found 60% patients were suffering from mild to moderate headache and proportion of patients with moderate to severe attacks were higher in patients with migraine than in those with TTH(82.6% and 35.8% respectively). Stress was found to be the commonest precipitating factor. Out of all respondents 65 (38.7%) had reported stress as a precipitating factor for the headache. Physical activity, fatigue and sleeping disturbance was reported as precipitating factors by 26(15.5%), 20 (11.9%) and 20(11.9%) respondents respectively. 86 (54.4%) reported drugs to relieve their headache. Out of all respondents 87(87%) had primary type of headache and 13(13%) had secondary type of headache. TTH was found commonest variants. 62 (62%) respondents had TTH, 14(14%) had MCH and 11(11%) had migraine. Out of 100 respondents 81 (81%) respondents did not required any radiological investigations. CT scan and MRI scan were done in cases with history of head trauma and other CNS disorders. 14(14%) cases underwent CT scan of head and 4(4%) underwent MRI scan of brain.

These investigations revealed stroke in 3(3%) cases and intracranial neoplasm in 1(1%) case. 10(10%) cases did not have any neuroimaging finding. One study by Habib M found that neuroimaging was done in 135 patients out of which 38.39% had abnormal findings. This is consistent with the findings in this study [25]. More women compared with men had higher prevalent rates for primary headache in this study as has been previously reported [21, 22]. In general, parenteral treatment is preferred because gastric stasis and delayed absorption of medication occur during an acute migraine attack [30]. Though these headaches have distinct epidemiologies and clinical phenotypes, there is overlapping response to therapy: non-steroidals, triptans, dihydroergotamine, and the anti-emetic dopamine-antagonists may play a therapeutic role for each of these acute headaches. Because these headaches often recur over the days and months following ED discharge, the responsibility of the emergency physician includes identifying as yet unmet treatment needs and ensuring successful transition of care of these patients to an outpatient healthcare provider. Herein, we review the diagnostic criteria and management strategies for the primary headache disorders. This has been attributed to the effect of female sex hormones specifically oestrogen. This may be due to the fact almost all patients with tumor are referred to the department of neurosurgery. Among patients without depression, although there was no significant difference between the two groups regarding suicidal thoughts, patients with CDH presented more hopelessness. In the CDH group, no difference was found comparing genders in relation to patients presenting neuroticism symptoms in general. However, on analyzing subtypes of disorders separately, it was noted that, in this group, women had more depression and suicidal ideation than men. So, it is possible to understand the despair, suicidal ideation and the larger number of combined disorders as a collapse of the organism in successive attempts to adapt to continuous pain, typical of a stress exhaustion stage [21]. It is primarily a neurological symptom but most often it is not associated with any other neurological features [24]. I will consider most common and neurological causes of headache. There is not much study regarding headache in our country so far. So this type of study will help the headache patients in future.

V CONCLUSION

Headache is one of the most common symptoms in the general population. Migraine and tension-type headache accounts for the vast



majority and, with minimal education and training, these could be diagnosed and managed in primary care or by general and emergency physicians working in acute medicine. Primary headache prevalence is high in our population. It is not recognised as that requiring care by most of the staff of this tertiary health facility; thus education is required to increase health care utilization.

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