Demographic and Clinical Pattern of Headache in Migraine Patients

MAJUMDER B[1], PAUL D[2], BARMAN KK[3], FERDOUSHI S[4], ISLAM MR[5], ROY NR[6], SALEHEEN MS [7], ISLAM MM[8]

Abstract

Background: Migraine is one of the most common neurological disorder and fourth most important factor for debility in human. The presentation of migraine is complex. All patients do not have same features of migraine. Objectives: The purpose of the study was to evaluate demographic and clinical patterns of headache in migraine patients. Methods: A total of 30 migraine patients who were visited in the Headache clinic, Department of Neurology, BSMMU, Dhaka were enrolled for the study. Migraine patients diagnosed according to ICHD-3 (International Classification of Headache Disorders 3rd edition) criteria. Results: Out of 30 patients mean age was 30.63±10.95 years with age range 15-60 years in migraine patients. Female were more common. Positive family history was present in 56.7% patients. Common associated symptoms were photophobia, phonophobia (96.7%) and nausea (83.3%) in migraine patients. Common precipitating factors were stress and sunlight (90%) followed by journey (80%) and insomnia (73.3%). A major portion of migraine was without aura (73.3%) and the ratio of aura to without aura is 1: 2.75. Major portion of migraine patients were complained of 4-6 attacks/ month (46.7%) which was followed by 1-3 attacks/month (36.7%). Most of the migraine patients complained as moderate headache (60%) followed by severe headache (40%). Conclusion: This study concluded that migraine is a disease of younger age group and it affects female more commonly than male, pattern of headache in migraine patients is unique.

Introduction:

Migraine is the primary headache disorder and the second most common neurological (next to nutritional disorders and neuropathies) problem throughout the world[1]. Annually it affects 12% population of the United States. It includes 18% women, 6% men and 4% children in the United States. Overall, the 1-year prevalence of migraine ranged from 3.0% in aged 11-14 years and 10.6% in age ranging from 5-15 years[2]. All the subtypes of migraine were more common in females[3] which is also consistent with the study done in Bangladeshi populations[4].

Migraine is a familial disorder characterized by recurrent attack of headaches widely variable in intensity, frequency and duration. Attacks are commonly unilateral and are usually associated with anorexia, nausea and vomiting[5]. In some cases, they are preceded by or associated with neurological and mood disturbances. Migraine sufferers typically have unilateral headache but it may be bilateral and complain of throbbing headache but equally it may be constant. They usually have some degree of nausea and/ or vomiting and often have sensitivity to light (photophobia) or sensitivity to sound

1. Dr. Bipasha Majumder, Medical Officer, Dept. of Laboratory Medicine , DMCH, Dhaka.
2. Dr. Debatosh Paul, Associate Professor, Dept. of Laboratory Medicine, BSMMU, Dhaka.
3. Dr. Kanuj Kumar Barman, Associate Professor, Dept. of Neurology, BSMMU, Dhaka.
4. Dr. Sheuly Ferdoushi, Associate Professor, Dept. of Laboratory Medicine, BSMMU, Dhaka.
5. Prof. (Dr.) Md. Rafiqul Islam, Professor and Chairman, Dept. of Neurology, BSMMU, Dhaka.
6. Dr. Niloy Ranjan Roy, IMO, Dept. of Neurology, DMCH, Dhaka.
7. Dr. Md. Shafiqus Salehin, Assistant Professor, Dept. of Neurology, M Abdur Rahim Medical College, Dinajpur
8. Dr. Md. Monirul Islam, Registrar (Medicine), Satkhira Medical College, Satkhira

(phonophobia)[6]. Normal physical activity that involves movement of the head aggravates the pain. Human biology knows few rules that do not have exceptions and many patients did not have all the features of migraine[7].

The presentation of migraine is complex. Two common clinical syndromes associated with migrainous headache can be identified easily that is migraine with aura and migraine without aura. Migraine with aura is called classical or neurologic migraine and migraine without aura is known as common migraine. The ratio of classical to common migraine is 1:5[8].

Some precipitating factors for headache are fatigue, stress, anxiety, cold, warm, sunlight, sleep deprivation/insomnia, food, activity, journey, reading etc. There are 5 relieving factors of headache such as sleep, drug, rest, posture, massage[9].

Aims and objectives:
To evaluate the demographic and clinical pattern of headache in migraine patients.

Materials and Methods:
This cross sectional analytical study from March, 2018 to February, 2019 was conducted in the Department of Laboratory Medicine, BSMMU, Dhaka, collaboration with the Department of Neurology, BSMMU, Dhaka. After ethical clearance from Institutional Review Board (IRB), patients having features of migraine according to ICHD-3 (International Classification of Headache Disorders, 3rd edition) was selected as study population by purposive sampling method.

Total 30 headache patients selected from headache clinic of outpatient department of Neurology of BSMMU. Age range of study group was 10-60 years. Informed written consent was taken from each patient.

Results:
The study included 30 migraine headache patients. Table I shows age group of study population, where the maximum number of patient 12(40.0%) in 21-30 age group. The mean age was 30.63±10.95.

Table-I
Age distribution of study subjects (n=30)

Age of the patient	Migraine headache patient (n=30) No. (%)
<20	5(16.7)
21-30	12(40.0)
31-40	9(30.0)
41-50	3(10.0)
51-60	1(3.3)
Total	30(100.0)
Mean ±SD	30.63±10.95

Table-II
Gender distribution of study subjects (n=30)

Gender	Migraine headache patient (n=30) No. (%)
Male	3(10.0)
Female	27(90.0)
Male: Female ratio	1:9

Table II shows the gender distribution of patients. Among 30 respondents 10% were male and 90.0% were female.

Table-III
Distribution of the study subjects by occupation (n=60)

| Occupation	Migraine headache patient (n=30) No. (%)
Service holder	3(10)
Business	0(0)
Housewife	15(50)
Others	12(40)
Total	30 (100)

Table-III shows maximum 50.0% patients were housewife, 10% patients were service holder and 40.0% patients had other profession.

Figure-1: Bar diagram showing the family history of migraine headache patient (n=30)
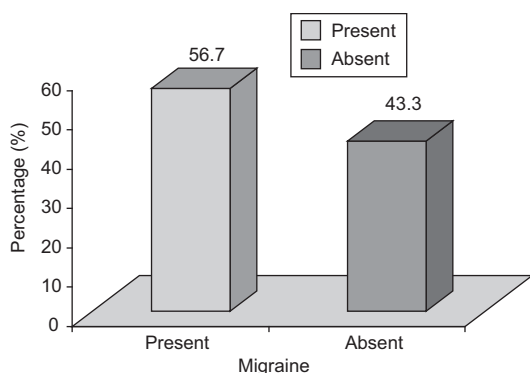
Fig.-1: *Bar diagram shows maximum patients 56.7% had positive family history and 43.30% having no family history of migraine.*

Figure-2: Bar diagram showing the severity of the headache in migraine patients (n=30).
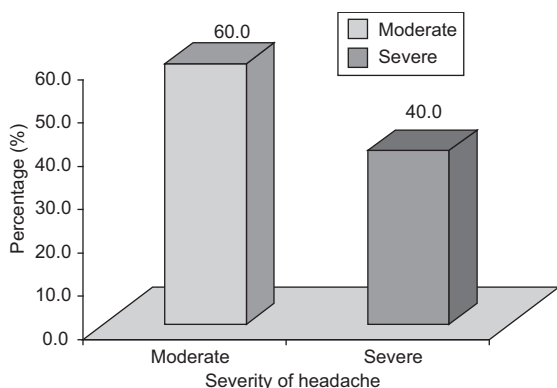
Fig.-2: *Bar diagram shows maximum patients 60% had moderate headache and 40.0% severe headache.*

Figure 3: Pie chart shows that a major portion of migraine patients were without aura (73.3%). Only 26.7% migraine patients gave history of experiencing aura.
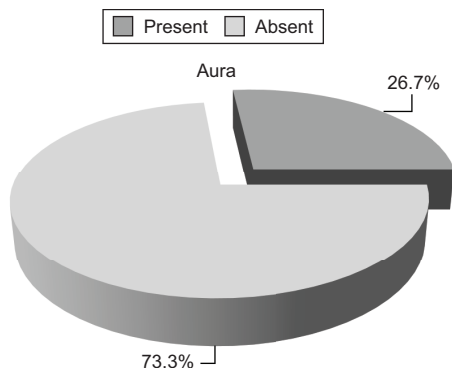
Fig.-3: *Pie chart showing distribution of migraine headache patient according to aura (n=30)*

Table-IV

Distribution of the migraine headache patient by frequency of attacks per month (n=30)

Frequency of attacks per month	No. of the Patient	Percentage
1-3	11	36.7
4-6	14	46.7
7-9	3	10.0
10-12	1	3.3
13-15	1	3.3
Total	30	100.0

Table-IV shows frequency of attacks of headache per month maximum 46.7% in 4-6 times, 36.7% patients had 1-3 times, 10.0% patients had 7-9 times and 3.3% patients had 10-12 times and 13-15 times.

Table-V

Distribution of the migraine headache patient with associated symptoms (n=30)

Associated symptom	Frequency	Percentage
Nausea	25	83.3
Vomiting	12	40.0
Vertigo	21	70.0
Phonophobia	29	96.7
Photophobia	29	96.7
Difficulty in concentrating/ Feeling lightheadedness	28	93.3

Table- V shows that the most common announcing associated symptoms were nausea (83.3%), phonophobia and photophobia (96.7%) in migraineurs.

Table-VI

Distribution of the migraine headache patient with precipitating factors (n=30)

Precipitating factors	Frequency	Percentage
Stress	27	90.0
Journey	24	80.0
Sunlight	27	90.0
Insomnia	22	73.3
Deprivation of food	5	16.7
Menstruation	2	6.7
OCP	8	26.7

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Table-VI shows that a major portion of migraine patients proclaimed stress (90%), sunlight exposure (90%) as precipitating factors for migraine which was followed by journey (80%) and insomnia (73.3%).

Table-VII
Distribution of the migraine headache patient with relieving factors (n=30)

Relieving factors	Frequency	Percentage
Rest	27	90.0
Sleep	28	93.0
Massage	22	73.0
Others (Hot & cold compression)	03	10

Table –VII shows that reported relieving factors of migraine patients are rest (90%), sleep (93%) and massage (73%).

Discussion:
This cross sectional study was carried out to see the demographic variations among the migraine headache patient. In this study, it was observed that maximum number of patient 12(40.0%) in the age group 21-30. The mean age was 30.63±10.95. Mean age 39.6 ± 11.1 and 37.7 ± 11.1 years respectively were also found[10]. Some study shows that migraine may start in early childhood. But its prevalence increases at 10 to 14 years of age and continues to increase until 35 to 39 years of age. Then it gradually decreases, particularly women after menopause[11]. These results are nearly similar to our study.

Among 30 respondents 10% male and 90.0% females were migraine headache patients. Female respondents were predominant. Female groups were more prone to develop migraine 69.3% and 81.7% respectively[12,13].

A major portion of migraine patients were housewife (50%) which was followed by student or other (40%). Housewife were the large group (28.6%) followed by student (17.6%) found in another study[14]. These are almost similar with our study. The possible reason may be in our country the housewives are more exposure to many provocative factors like physical and mental stress, irregular of food, menstruation, birth control pill intake etc.

Migraine has a strong genetic component and the familial risk of migraine is increased as exhibited by population-based family studies[15] which coincides with our study where 56.7% of migraine patients had family history of migraine headache.

Migraine headache severity was divided into mild, moderate and severe group according to visual analogue scale. Among the migraine patients, most of the patients complained of moderate headache which is about 60% followed by severe headache (40%). But no one complained headache severity as mild. According to International Classification of Headache Disorder migraine headache severity is moderate to severe intensity[16] which is also consistent with our study.

Among the 30 migraine patients, 08 (26.7%) patients had migraine with aura and 22 (73.3%) patients had migraine without aura and the ratio is 1:2.75. Another study[17] found that among 32 subjects, 26% (7) patients had migraine with aura and 74% (20) patients had migraine without aura, ratio was 1:2.85 which is almost similar to our study. In another study[8] found the ratio of migraine with aura to migraine without aura is 1:5 which is near to our study.

A major portion of migraine patients were complained of 4-6 attacks/month (46.7%) which was followed by 1-3 attacks/month (36.7%). Another study done in this country[14] reported as 30.76% patients suffer 3 or less attacks per month and 4 or more attacks in 16.15% per month.

According to associated symptoms of migraine, the most common announcing associated symptoms were photophobia (96.7%), phonophobia (96.7%) and nausea (83. 3%) in migraine patients. Another study[18] shows that most common symptoms associated with headaches were phonophobia (91.6%) and photophobia (85.4%).

Most of the migraine patients, proclaimed stress and sunlight as precipitating factors of migraine (90%) which was followed by journey (80%) and insomnia (73.3%). Another study[19] showed that most common precipitating factors were stress,

tension, not eating on time, fatigue and lack of sleep. Similar result was[20] mentioned that the most frequent triggers of migraine were mental exertion, exposure to the sunlight, heat and anxiety.

Most common relieving factor for migraine patients are sleep (93%) and rest (90%). Another study[14] reported analgesic (83%), sleep (80%) which is consistent with the present study.

Conclusion:

This study showed that migraine headache was common in young age group and female predominant. This study may also provide baseline information regarding migraine headache pattern.

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