Socio Demographic and Headache Characteristics of Migraine Patients in a Tertiary Care Hospital in Bangladesh

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Abstract:

Migraine is a common type of headache. After tension type headache, it is the second common cause of primary headache disorder with a female preponderance.This cross sectional study was done toassess the sociodemographic characteristics of migraine patients in Bangladeshi population and to see the characteristics of headache and associated comorbidities of migraine patients.The study was conducted in a tertiary care hospital (Mymensingh medical college) of Bangladesh.The study subjects consisted of 60 patients with migraine headache seen in neurology OPD.Mean age was 32.03± 11.74 yrs. Male female ratio was 1: 2.7.Most of them are housewives (61.6%). 22% had family history of headache. Most of the patients had severe (53.4%) and frequent (e"3 per month) headache attacks. Aura was present in 25% patients. Depressive illness was the associated comorbid condition which was found in 15% patients.

Key words: *Migraine, Socio demography, Comorbidity*

Introduction:

Migraine is a common type of headache. After tension type headache, it is the second common cause of primary headache disorder with a female preponderance. Migraine constitutes 16% of primary headache and it affects 10-20% of general population[1].Lifetime prevalence ranging between 14 and 16 %[2]. It is ranked as third highest cause of disability worldwide in both males and females under the age of 50 years[3]. It is a unilateral, recurrent, episodic headache associated with nausea and or vomiting and sensitivity to light, sound or movement. Studies have revealed that 4-6% of men, 13-18% of women are afflicted with migraine worldwide over a 1-year period[4].It usually begins in adolescence but may occur in childhood. More than 80% of cases it begins before the age of 30, and in 50% of cases before 20 years of age[5].World Health Organization declared migraine as the most disabling medical conditions experienced worldwide[6]. The indirect costs of migraine related to decreased productivity and lost days of work have been calculated to be $13 billion per year[7]. The pathophysiology of migraine is still unclear. There are few hypothesises.Clinical and experimental evidence supports the concept of abnormal intracranial and extra cranial vascular reactivity in migraine and other vascular headaches.In 2018 the Third Headache Classification Committee of International Headache Society (IHS) published a detailed classification of Headache Disorders, the 3rd edition[8]. In that edition Migraine headache is classified in six subtypes. There is evidence that the patients with migraine are often comorbid with other diseases, such as stroke, hypertension, diabetes, Bronchial Asthma, obesity and depression[9,10]. We believe that a nationwide

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epidemiological study of migraine in the general population is needed. And as a primary work, a hospital based study to asses the section of population with migraine headache and its characters would be helpful. Therefore, the aim of this study was to assess the sociodemographic characteristics of migraine patients in Bangladeshi population and to see the characteristics of headache and associated co morbidities of migraine patients.

Methods:

This cross-sectional study was carried out in the outpatient department of Neurology, Mymensingh Medical College Hospital, Bangladesh from January 2018 to Dec 2018. The patients were selected on the basis of International headache society (IHS) migraine headache criteria[8].Total sixty patients with the typical history of migraine, age above 12 years were included in this study. Headache due to other than migraine and those were refused to include in this study were excluded.The clinical features, investigation findings and relevant data were collected in a preformed data sheet from each patient. Severity of headache was assessed by visual analogue scale. Co morbid conditions were assessed by relevant history and investigations. Depression was diagnosed on the basis of DSM-IV criteria. Informed written consent was taken from each participant. The study was approved by the Institutional review board (IRB) of Mymensingh Medical College. Analysis of data was done by SPSS version 23.

Results:

This cross-sectional study was done on 60 patients attending in outpatient department of Neurology, Mymensingh Medical College Hospital with migraine fulfilling the criteria of international headache society. Sociodemographic variables and characteristics of headache were assessed. Other co-morbidities were also documented.

Table-I

Characteristics of migraine patients (n=60).

Age(Years)	Frequency (N=60)	Percentage
<20	07	11.7
20-30	27	45
31-40	10	16.7
41-50	11	18.3
>50	05	8.3
Mean± SD	32.03± 11.74	32.03± 11.74
Sex		
Male	16	26.7
Female	44	73.3
Occupation		
Housewife	37	61.6
Student	10	16.7
Business	05	08.3
Service	04	6.7
Others	04	6.7
Socioeconomic status		
Lower class	30	50
Middle class	29	48.3
Upper class	01	1.7
Family history of headache		
Present	22	36.7
Absent	38	63.3

Table-1 demonstrates the socio demographic variables. The mean age of migraine patients was 32.03 ± 11.74 years.Highest no. of patients was in age group 20 to 30 years. Regarding gender distribution, 26.7% patients were male and 73.3% were female. Male to female ratio was 1: 2.75. Maximum (61.6%) patients were housewife. 50% belongs from lower class and 48.3% were from middle class. Family history of headache was found in 36.7% patients.

Table-II
Characteristics of headache of migraineurs (n=60)

Characters	Frequency (N=60)	Percentage
Severity of headache		
Mild	04	6.6
Moderate	24	40
Severe	32	53.4
Frequency of headache		
<3 per month	18	30
≥3 per month	42	70
Location of headache		
Unilateral	50	83.3
Bilateral	10	16.7
Type of migraine		
With aura	15	25
Without aura	45	75

Table II demonstrates the headache characteristics. Quality of headache was moderate (40%) to severe (53.4%). Most of the patients (70%) had headache frequency e"3 per month. Unilateral headache in 83.3% patients and migraine with aura was present in 25% patients whereas most of the patients (75%) had migraine without aura.

Table-III
Distribution of migraine patients with various comorbid conditions (n=60).

		Frequency (n=60)	Percentage
Hypertension	Present	04	6.6
	Absent	56	93.4
IHD	Present	03	5
	Absent	57	95
Stroke	Present	02	3.3
	Absent	58	96.7
Epilepsy	Present	01	1.7
	Absent	59	98.3
Depression	Present	15	25
	Absent	45	75

Table III shows the associated comorbidities with migraine headache, Very few cases had Hypertension, Ischemic heart disease, Stroke and Epilepsy. But 25% patients had associated depression.

Discussion:

This Cross-sectionalstudy was carried out in outpatient department of Mymensingh medical college hospital, Mymensingh. Total 60 patients of migraine were studied according to selection criteria. Sociodemographic and headache characteristics were studied. Associated comorbid conditions were also assessed.

In the study 45% of the migraine patients were in the age group 20-30 years. Majority of the patients (61.7%) were in 20-40 years age group. Mean age of migraine patients was 32.03 ±.74 years. 26.7% were male and 73.3% were female. The male and female ratio were1:2.7. Similar findings were observed in a study[11] in Bangladesh in 2017 where the mean age was 33.8±8.8 years. They found 76% patients were between 21-40 years. Male: female ratio was 1:2.6. Another study[12] found nearly 79.6% patients were from 15-35 years and male: female ratio was 1:1.7.

In this study, house wives and students occupied the largest number of study subjects, 61.6% and 16.7% respectably. Hasanet al[12] found housewife 43.7% and student 28.1%. Boru et al.[13]and Hossain et al[11] also observed most of the migraine patients were house wives. Regarding socioeconomic status among migraine patient, 50% were of low income group and 48.3% were of middle class group.Only one patient from higher socioeconomic class may be due to lack of their presence in outpatient department. Stewart (2013)[14] mentioned migraine is more prevalent in low socioeconomic condition. A population based study[15] was also found Migraine is more prevalent in low socioeconomic conditions. In our study we found more or less similar patients in these two groups, may be due to small sample size and hospital based study.

Family history of headache was present in 36.7% patients. Mixed findings were observed in different studies. Boru et al.[13] reported positive family history in 33.1 % cases of migraine which is similar of this study whereas Boes et al.[16] found it in 90% of cases.

Regarding headache characteristics we found 53.4% patients had severe headache and 40% had

24

moderate headache. Most of the patients (70%) had headache frequency 3 or more per months and headache starts unilaterally (83.3%). Hossain[11] found 56.7% with severe headache. Gulet al[17] found average 4.08 attacks per month. In this study, migraine with aura was 25% and migraine without aura was 75% and ratio was 1:3. In previous cross sectional population study[18] the ratio was 1:5.

Migraine with associated comorbid conditions, we found very few percentage of patients with Hypertension, Ischemic heart disease, Stroke and Epilepsy. But over 15% patients had associated depression. In Buse et al study[19], they found people with migraine were significantly (P < 0.001) more likely to report insomnia (OR 3.79 [3.6, 4.0]), depression (OR 3.18 [3.0, 3.3]), anxiety (OR 3.18 [3.0 3.3], angina or IHD (OR 2.64 [2.4, 3.0]). Hossain[11]found 18.2% patients had Major depressive disorder and 24.2% had generalised anxiety disorders.

Limitation:
It was a hospital based study with small sample size, so complete epidemiological statistics might not been achieved what would have been assessed in a large community study.

Conclusion:
In conclusion, from this study we found migraine is more common in 20-40 years age group and females are more sufferer than males and most of them are housewives. 22% had family history of headache. Most of the patients had severe and frequent headache. Aura was present in 25% patients. Depressive illness was the associated comorbid condition which was found in 15% patients. Further large community study should be carried out for better understanding of demographic and clinical characteristics of this prevalent disorder.

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