Original Research Article.

The Sociodemographic Characteristics of Migraine Patients in Bangladesh

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ABSTRACT

Objective: In this study our main goal is to assess the sociodemographic characteristics of migraine patients in Bangladesh.

Methods: This randomized single blind cross over clinical trial was conducted at Department of Pharmacology, Dhaka medical college, Dhaka from July 2017 to June 2018. During the study, adult 64 migraine sufferers (without aura) attending in the Out Patient Department of neurology (Headache clinic), Dhaka Medical College Hospital, Dhaka. One half of the samples were randomly allocated for group A and the other half to group B. Group A: 32 patients will be allocated for the prophylaxis of propranolol. Group B: 32 patients will be allocated for the prophylaxis of flunarizine.

Results: During the study, mean age of the group A and group B was 29.28 and 28.22 years respectively also, group A 37.50% were male and 62.50% were female (male: female= 1:1.66) and in group B were 34.37% were male and 65.62% were female. After receiving prophylaxis at the end of 1st and 2nd phase of trial. Significant improvement was observed in group A when they were under trial of propranolol. Similar observation was also elucidated in group B during 2nd phase of treatment when drug was crossed over.

Conclusion: From our study we can say that, preventive treatment often makes migraine attacks more responsive to acute migraine therapies, reduces migraine associated disability, improves the patient's abilities to function, and decreases healthcare costs and use of healthcare resource. Further study is needed for better outcome.

Keywords: Sociodemographic Characteristics, Migraine, Propranolol.

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INTRODUCTION

Migraine is a primary neurobiological disorder, resulting from dysfunction of the trigeminovascular system. The disorder manifests as recurring attacks of headache, usually lasting 4-72 hours. These attacks, which can interfere with normal functioning, involve unilateral throbbing headache, pain of moderate to severe intensity. They also usually involve nausea, sometimes vomiting, and light, sound, and sensitivity to other sensory stimuli.[1]

The biggest obstacle to managing primary headache and perhaps migraine more than any other, is the correct diagnosis. The lack of classification system and diagnostic tests has hampered doctors of many years. The International Headache Society's classification system for headache published in 1988 listed operational diagnostic criteria for migraine. These were designed primarily for research and teaching. They are not a substitute for a through clinical review, but they provide useful guidelines to start.[2,3] The criteria that identify migraine is by its characteristics, which is only to say that migraine is a symptom complex or syndrome that manifests as discrete episodes of headache with associated features that may all be characterized broadly as a sensory sensitivity. Migraine is no one thing in the clinical sense it is headache along with other features-whereas tension type headache is just headache Migraine sufferers typically have unilateral headache (but it may be bilateral) and complain of throbbing headache (but equally it may be constant).[1,4] They usually have some degree of nausea and often have sensitivity to light (photophobia) or sound (phonophobia). They often find normal physical activity that involves movement of the head aggravates the pain. However, human biology knows few rules that do not have exceptions, and many patients will not have all the features of migraine. In this study our main goal is to assess the sociodemographic characteristics of migraine patients in Bangladesh.

OBJECTIVE
General Objective
▪ To evaluate the sociodemographic characteristics of migraine patients in Bangladesh.
Specific Objective
▪ To detect status of intake drugs for relieve of acute attack of migraine
▪ To identify HUI score among patients.

METHODOLOGY
Type of Study: Randomized single blind cross over clinical trial.
Place of Study: Department of Pharmacology, Dhaka medical college, Dhaka.
Study Period: July 2017 to June 2018.
Study Population: Adult 64 migraine sufferers (without aura) attending in the Out Patient Department of neurology (Headache clinic), Dhaka Medical College Hospital, Dhaka.
Sampling Technique: Purposive
Inclusion Criteria
▪ Migraine attacks occurring more than twice a month.
▪ One attack a month with sufficient severity or disability to warrant the cost and inconvenience of daily medication.
Exclusion Criteria
▪ Migraine attack frequency and severity vary considerably over time
▪ Ischemic heart disease
▪ Peripheral vascular disease
▪ Coronary artery disease
▪ Uncontrolled hypertension
▪ Known impaired hepatic or renal function
▪ Pregnancy
▪ Hemiplegic or basilar migraine
▪ Concurrent use of ergotamine, dihydroergotamine, methysergide or combined drugs
▪ Chronic obstructive pulmonary disease.
▪ Bronchial asthma.
▪ Diabetes Mellitus.
▪ Patients aged below 13 years and over 45 years will excluded from the study
Method
In this study, one half of the samples were randomly allocated for group A and the other half to group B. Group A: 32 patients will be allocated for the prophylaxis of propranolol. Group B: 32 patients will be allocated for the prophylaxis of flunarizine. Data was collected at the out Patient Department of Neurology (headache clinic), Dhaka Medical College Hospital, Dhaka. The samples were interviewed with a questionnaire. Pain intensity was assessed with a pain scale. All patients gave their informed consent before entering the study and the protocol of this study was approved by Local Ethical Committee of Dhaka Medical College. Each patient had a complete physical and neurological examination before the study. Patient suffering from migraine without aura according to International Headache Society criteria were randomly assigned to treatment.
Data Analysis: All data were recorded systematically in data collection form. Quantitative data were express as mean and standard deviation and qualitative data as frequency distribution and percentage. Data were edited prior to computer entry and analysis. Simple frequencies were calculated and multivariate analysis was done using SPSS software to determine the relationship among the different variables.

RESULTS
In table 1 shows sociodemographic characteristics of the patients where mean age of the group A and group B was 29.28 and 28.22 years respectively also, group A 37.50% were male and 62.50% were female (male: female= 1:1.66) and in group B were 34.37% were male and 65.62% were female (male: female=1: 1.90).
In table-2 shows distribution of the respondent's marital status by group where out of all patients of group A 68.75% were married and 31.25% were unmarried. In group B 65.62% were married and 34.38% were unmarried.
In table-3 shows distribution of the respondent's occupation by group where out of all patients of group A maximum 43.75% were housewife followed by 25% student, 18.75% service holder, 6.25% were businessman and day labourer. In group B maximum 43.75% were housewife, 31.25% student, 9.37% were service holder and business and rest 6.25% were day laborers.

Table 1: Sociodemographic characteristics of the patients

AGE (IN YEAR)	Group A (n=32)	Group B (n=32)	P Value
15-24	15 (46.87)	14 (43.75)	
25-34	10 (31.25)	12 (37.50)	
35-44	4 (12.50)	4 (12.50)	
45-49	3 (9.37)	2 (6.25)	
Total	32 (100)	32 (100)	0 .459
Mean ± SD	29.28±10.20	28.22±10.27	
GENDER	Group A (n=32)	Group B (n=32)	
Male	12 (37.50)	11 (34.37)	
Female	20 (62.50)	21 (65.62)	

Table 2: Distribution of the respondent's marital status

Marital status	Group A (n=32)	Group B (n=32)
Married	22 (68.75)	21 (65.62)
Single	10 (31.25)	11. (34.38)

Table 3: Distribution of the respondent's occupation by group

Occupation	Group A (n=32)	Group B (n=32)
Service	6(18.75)	3(9.37)
Housewife	14(43.75)	14(43.75)
Student	8(25)	10(31.25)
Business	2(6.25)	3(9.37)
Labourer	2(6.25)	2(6.25)

Table 4: Distribution of the respondent's quality of life affected by migraine

Quality of life affected by migraine	Group A (n=32)	Group B (n=32)	P Value
Extremely	2(6.25)	3(9.37)	0.60
Moderately	26(81.25)	22(68.75)	0.03
Very little	4(12.5)	7(21.87)	0.04

*chi-square test was done to measure the level of significant.
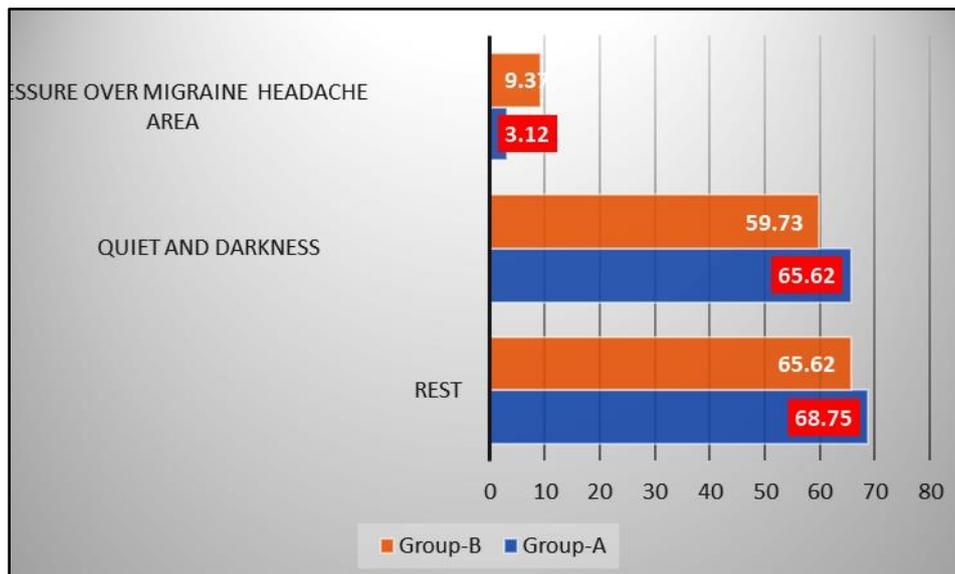Parenthesis indicated in column percentage

Figure 1: Distribution of the respondent's by relieving/soothing factor.

In figure-1 shows distribution of the respondent's by relieving/soothing factor where the most common relieving factors of both groups were rest (68.75% vs. 65.62%), quiet and darkness (65.62% vs. 59.73%) and pressure over migraine area (3.12% vs. 9.37%).

In table-4 shows distribution of the respondent's quality of life affected by migraine where out of all patients of group A 81.25% had moderately, 12.5% had very little, and 6.25% had extremely affected daily life. In group B 68.75% had moderately, 21.87% had very little and 9.37% had extremely affected daily.

DISCUSSION

A variety of drugs have been in vogue to prevent attacks of migraine. The basic principle in management of migraine is avoiding the trigger factors, blocking the mediator and splinting the end organ. Although there are many therapeutic agents and other approaches that have been used for migraine prevention, there is a robust evidence base for only eight drugs and two non-pharmacological approaches; those with the best documented efficacy are some beta-blockers, flunarizine, sodium- valproate, topiramate, methysergide and amitryptyline. The decision in clinical practice as to which of the options is optimal is based on the strength of the evidence for efficacy, the physician's clinical experience, the drug's adverse event profile, the patient's preferences, headache subtype (antiepileptic drugs are generally preferred in migraineurs with aura), the presence or absence of coexisting condition and comorbid disorders, and the potential for childbearing.[5,6]

One study reported that, propranolol is a non-selective beta blocker mainly used in the treatment of hypertension. It was the first successful beta blocker developed. It is the only drug proven effective for the prophylaxis of migraine in children and adult. Propranolol is available in generic form as propranolol hydrochloride. In our study, at 8 weeks of two phases where after receiving prophylaxis at the end of 1st and 2nd phase of trial. Significant improvement was observed in group A when they were under trial of propranolol. Similar observation was also elucidated in group B during 2nd phase of treatment when drug was crossed over.[7]

Since migraine attacks are often frequent, they require management with agents that reduce their number. Such agents, although often effective, are ill- understood. It has been suggested that they work through four main mechanisms. 5- HT antagonism, modulation of plasma protein extravasation, modulation of central aminergic control mechanisms and membrane stabilizing effects through actions at voltage- sensitive channels.[1] The mechanism of action is unrelated to its antidepressant activity. Flunarizine is a calcium channel blocker, most widely prescribed drugs for adults and adolescent. Propranolol is also one of the most commonly prescribed drugs for migraine prophylaxis. Exactly how bête-blockers decrease the frequency of migraine attacks is not certain. The mechanism of action of beta- blockers in migraine prophylaxis is unknown; hypotheses include inhibition of central beta-receptors modulation of 5-HT receptor activity, and cross-regulation of serotonergic pathways.[1]

Out of all patients of group A 81.25% had moderately, 12.5% had very little, and 6.25% had extremely affected quality of life. In group B 68.75% had moderately, 21.87% had very little and 9.37% had extremely affected quality of life. In this study only few proportions of the participants had positive family history.. In a study it was found that the likelihood ratio of migraine when compared with patients with family history of migraine with patients having no family history of migraine was more than 5%.[7]

CONCLUSION

From our study we can say that, preventive treatment often makes migraine attacks more responsive to acute migraine therapies, reduces migraine associated disability, improves the patient's abilities to function, and decreases healthcare costs and use of healthcare resource. Further study is needed for better outcome.

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