



PREVAILENCE OF MIGRIANE IN A LOW INCOME COMMUNITY OF KARACHI

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ABSTRACT

Migraine is the most common problem affecting large population, with prevalence frequency 10-12 %. This study was conducted to evaluate the prevalence of migraine in a low income community in Karachi from June-Oct, 2013. Three hundred and seven participants were involved in this study. For this purpose cross-sectional community based questionnaire was designed in accordance with the diagnostic criteria given by International Headache Society. Data collection was carried out by personal visit to patients and through clinics. It was observed that females (65.5%) are more affected from migraine then male. 32.9% housewives reported that they are suffering from migraine. This medical problem is common among youngsters (38.1%) than old citizens. Employees working in different organizations (39.7%), were found to be mostly affected from migraine then self employed persons. Majority of the migraine patients (41%) reported that they are suffering from common symptoms including: photophobia, phonophobia, nausea, vomiting etc. Dietary habits of individuals were found to be closely associated with migraine such as use of caffeine, chocolate are prominent; and their use is common among 75% patients cumulatively. It was evaluated that certain disease conditions i.e. stress (33.6%), depression (22.1%) and anxiety (18.9%) are more common among sufferers of migraine.

Key words: Migraine, common symptoms, triggers, Pakistan



INTRODUCTION

Migraine is a common problem affecting vast population of under developed countries. Migraine has prevalence frequency i.e. 10-12 % and categorized as 19th major problem worldwide.¹ It is characterized by pulsating, episodic pain which occurs unilateral or bilateral, with varying intensity of moderate to severe. The attacks of migraine may last from 4 to 72 hours, and its other symptoms include: nausea, vomiting, irritation to light [photophobia], and irritation to sound [phonophobia] etc.^{2,3} The possible cause of pain is described as “migraine initiates in brain in serotonergic and noradrenergic neurons. This debilitating pain is because of the dilatation of arteries sensitive to pain lies outside the brain which also include scalp arteries”. Factors responsible to trigger pain are important which include stress, consumption of vasoactive amines foods e.g. chocolate and cheese, allergy induced by food, and hormonal changes may also induce pain.³ The International Headache Society (IHS), described the clinical diagnosis of migraine into two classes as migraine with Aura and without

Aura.¹ Migraine with aura is also known as classic migraine. In this type of migraine patient feels aura half an hour before the actual pain starts. It has transient focal neurological symptoms including visual disturbance which is followed by headache.⁴ Migraine without aura is the most common type of migraine. Its symptoms include sudden onset of throbbing, unilateral pain which becomes more severe on movement and may last for 4-72 hours if untreated.⁵ In Pakistan diagnostic tools of migraine are not frequently used therefore, unfortunately patients remain un-diagnosed.⁶ Several studies have been conducted at community level⁷⁻¹³ to evaluate the prevalence of migraine but this study was designed with the aim to evaluate the prevalence of migraine in a low income community in Karachi and to assess main triggers of migraine among residents.

METHOD

This study was conducted in Akhter Colony (Karachi) during June-Oct, 2013. For this study total 307 participants were involved, 201 female and 106 male. Approximately 350 questionnaires

were analyzed of which 307 were properly filled and included in this study and incomplete questionnaire were excluded. To conduct this study a cross-sectional community based questionnaire was developed. The questionnaire was designed in accordance with the diagnostic criteria given by International Headache Society (IHS). Data was collected by personal visit to patients and through clinics where physicians provided the information about their patients. Participants diagnosed with migraine (with or without aura) were selected for this study. A prior consent was taken from all participants of this study. The questionnaire was comprised of two sections including the demographic and clinical characteristics of patients. For collecting the clinical information of patients, following items were included in the questionnaire:

- Number of migraine attack per patient.
- Most common symptoms of migraine attack during/before initiation of pain
- Duration of migraine attack
- Usual time of migraine attack
- Location of pain Usual cause of migraine
- Inherited factor
- Intake of selected food items that may initiate pain
- Any other medical problem along with migraine
- Triggers that may initiate or exaggerate pain

The data obtained was analyzed on SPSS 20.0 to analyze the response of respondents of this study.

RESULT

In this study only 307 participants including female and male provided the response. Of 307 participants 201 female (65.5%) and 106 (34.5%) male responded the questionnaire. The overall response of the participants was found to be 87.71%. **Table 1**, contains the socio-demographic details of the study population and **Table 2** shows onset time of migraine, its triggers and other medical problems of patients. It was observed that youngsters with age group 21-30 are more affected with migraine (n= 117, 38.1%) as compared to other age groups. There is a significant relationship found between gender and occupation ($p < 0.000$) of patients, the family history of patients ($p < 0.000$), and eating habits ($p < 0.007$) of the patients. Whereas no significant association was found between age of patients, frequency of migraine, symptoms of migraine, duration of migraine, onset of migraine, location of pain, other medical problems, causes of migraine, and triggers of migraine among patients.

DISCUSSION

In the last decade headache has been a major disorder suffering a large population in developing countries.^{14,15} It produces best result when treatment measures should take early. The most common medications used for the management of pain are NSAIDS and opioid analgesics, administered at the onset of pain.¹⁶

This study reveals that women are more affected from migraine than men, specially youngsters and middle aged peoples are more affected from migraine than old citizens. It has also been evaluated by another study conducted by Lipton et al, 2007.¹⁷ From this study it is revealed that most of the people suffering from migraine experience migraine once in a month while in less number of patients its frequency is once in a week. Location of pain is another important aspect. It was determined that most of the patients feel unilateral pain and others feel bilateral pain respectively on high frequencies resembling to a study conducted by Winner et al 2003.¹⁸ It was evaluated that duration of pain in approximately half of the patients is 2-5 hours whereas among 21% it lasts for 5-72 hours. In this study almost half of the patients mentioned that they experience all common symptoms of migraine including nausea, vomiting, photophobia and phonophobia during attack. Stephen and Silberstein, 1995 also reported the occurrence of common symptoms in large population suffering from migraine.¹⁹ As it has been discussed that dietary habits play a significant role in the initiation of pain and it was reported in this study that majority of the population is habitual of taking tea, chocolates, dairy products and citrus fruits. These food items are the most common triggers for migraine as it was also described in another study conducted by Millichap and Yee, 2003.²⁰ Stress and depression have been determined to provoke the migraine on a higher frequency as described earlier.²¹ This study was conducted in a low income community where socio-economical problems are more prevailing as compare to high income communities; therefore, a large number of employees belonging to this community reported migraine as a major problem which affects their daily routine badly. In an another study conducted in a low income group reported the increased number of migraine patients and their link with the economical problems.²²

Conflict of Interest: Authors have no conflict of interest.

Table I Characteristics of study population

S.No	Characteristics	Number (Percentages)
1	Gender	
	Male	106 (34.5%)
	Female	201 (65.5%)
2	Age	
	10-20	18 (5.9%)
	21-30	117 (38.1%)
	31-40	95 (30.9%)
	41-50	48 (15.6%)
	51 and more	29 (9.4%)
3	Occupation	
	Student	76 (24.8%)
	Housewives	101 (32.9%)
	Job	122 (39.7%)
	Business/self employed	8 (2.6%)

Table: 2 Onset of migraine, Triggers of migraine, Other disease associated with patients

S.No	Characteristics	Number (Percentages)
1	Onset of Pain	
	In morning	74 (24.1%)
	During Sleep	19 (6.2%)
	Not at specified time	202 (65.8%)
	Others	12 (3.9%)
2	Triggers	
	Change dietary habits	31 (10.1%)
	Change sleep time	117 (38.1%)
	Sleep behavior change	46 (15.0%)
	Others	113 (36.8%)
3	Disease conditions	
	Depression	68 (22.1%)
	Stress	103 (33.6%)
	Anxiety	58 (18.9%)
	None of them	36 (11.7%)
	All of them	42 (13.7%)

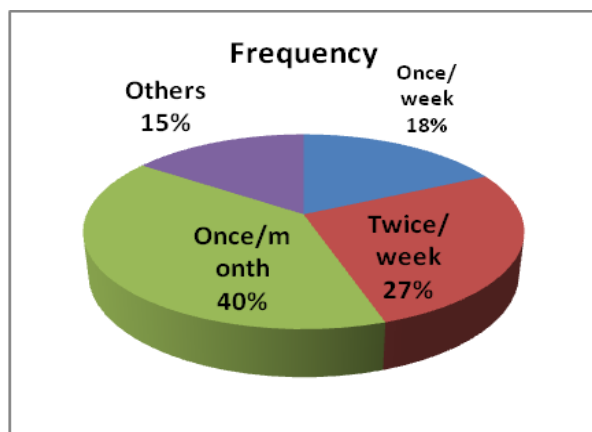


Fig-1: Frequency of migraine

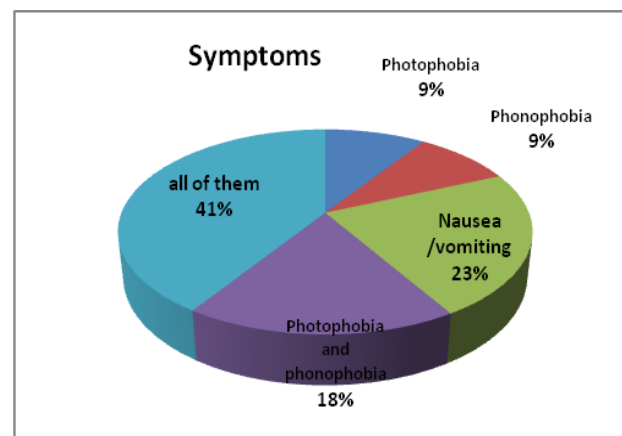


Fig-2: Symptoms of migraine

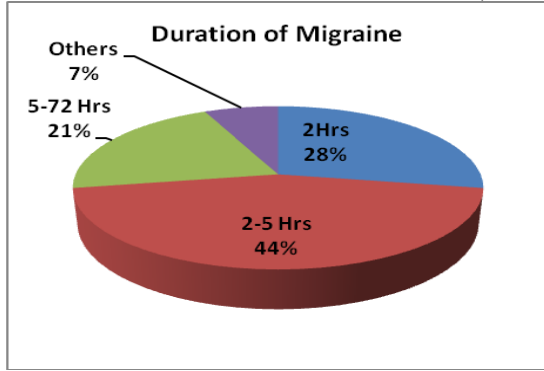


Fig-3: Duration of migraine

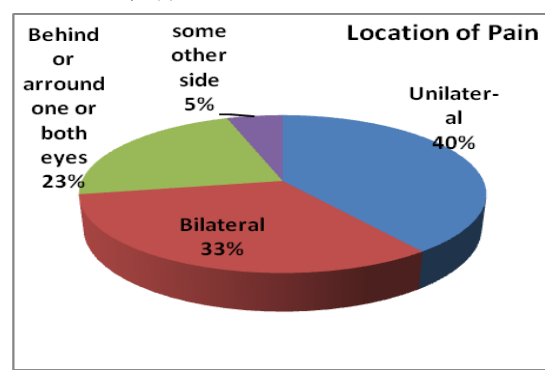


Fig-4: Location of migraine

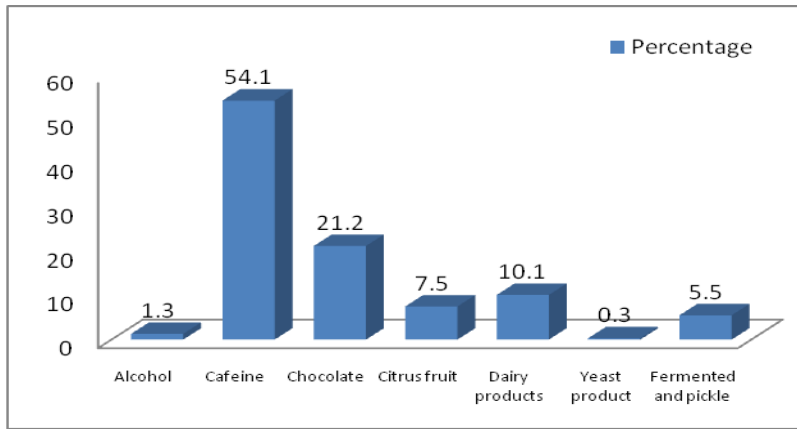


Fig-5: Eating habits of migraine patients

REFERENCES

- Headache Classification Subcommittee of the International Headache Society: The international classification of headache disorders. 2nd edition. Cephalalgia. 2004; 24: 1-160. <http://ihs-classification.org/> (Accessed: Dec 14, 2013)
- Barnes N P, Jayawant S. Migraine. Arch Dis Child Educ Pract Ed. 2005; 90:53-57.
- Bennett PN, Brown MJ. Clinical Pharmacology; Pain and Analgesics, 9th ed., Elsevier, 2005, pp. 326-327.
- Westermann CJ *et al.* The prevalence and manifestations of hereditary hemorrhagic telangiectasia in the Afro-Caribbean population of the Netherlands Antilles: a family screening. Am J Med Genet A. 2003; 116: 324-328.
- Klein E, Spencer DC. Migraine frequency and risk of cardiovascular disease in women. Neurology. 2009;73: 42- 43.
- Noushad S *et al.* Misconceptions of headache and migraine in young Pakistani male sufferers. Pak. J. Health Research. 2013; 1(1): 12-16.
- Alders EE *et al.* A community-based prevalence study on headache in Malaysia. Headache. 1996; 36: 379-384.
- Bokhari FA *et al.* Clinical characteristics of 226 college-going female migraineurs in Lahore, Pakistan- Putting ICHD-2 to the road test. Neuroendocrinol Letter.2008; 29(6):101-100.
- Gobel H *et al.* The epidemiology of headache in Germany: a nation-wide survey of a representative sample on the basis of the headache classification of the International Headache Society. Cephalalgia. 1994; 14: 97-106.
- Henry P *et al.* A nation-wide survey of migraine in France: prevalence and clinical features in adults. Cephalalgia. 1992; 12: 229-237.
- Rao GN *et al.* The burden of headache disorders in India: methodology and questionnaire validation for a community-based survey in Karnataka State. J Headache Pain. 2012; 13(7):543-550.
- Wang SJ *et al.* Prevalence of headaches in a Chinese elderly population in Kinmen: age and gender effect and cross-cultural comparisons. Neurology. 1997; 49: 195-200.
- Wang SJ *et al.* Prevalence of migraine in Taipei: a population-based survey. Cephalalgia. 2000; 20: 566-572.
- Rang and Dales, Pharmacology; Peripheral mediators: 5-hydroxytryptamine and purines, 6th ed. Churchill Livingstone Elsevier, 2008; pp. 195-196.
- Mateen FJ *et al.* Headache disorders in developing countries: research over the past decade, Cephalalgia. 2008; 28: 1107-1114.
- Ruth Woodrow, Essentials of Pharmacology for Health Occupations; Analgesics, Sedatives and Hypnotics, 5th ed., 2007; pp. 339.
- Lipton RB *et al.* Migraine prevalence, disease burden and the need for preventive therapy, Neurology. 2007; 68 (5): 343-349.
- Winner DO P *et al.* Demographic and migraine characteristic of adolescents with migraine, Headache. The journal of Head and Pain. 2003; 43 (5): 451-457.
- Stephen D, Silberstein MD. Migraine symptoms; Results of a survey of self reported Migraineurs, Headache. The journal of Head and Pain. 1995; 35 (7): 387-396.
- Millichap GJ, Yee MM, The diet factor in pediatric and adolescent migraine. Pediatric Neurology. 2003; 28 (1): 9-15.
- Lanteri-Minet M *et al.* Anxiety and depression associated with migraine. Pain. 2005; 118 (3): 319-326.
- Walter F *et al.* Prevalence of Migraine headache in United states. JAMA. 1992; 267(1): 64-69.