

Prevalence of Migraine in Medical Students of Dubai Medical College, UAE

Tasneem Sandozi*, Hana Iqbal and Maryam Haitham Salman

Department of Pharmacology, Dubai Medical College, UAE

Abstract

Aim: To assess the prevalence of migraine in students at Dubai Medical College, UAE

Material and methods: A cross sectional questionnaire based study was undertaken for three months between December 2020 and February 2021, in Dubai Medical College for Girls, UAE.

Results: The students from the first to the final year of MBBS participated in the study. (n=147) 37% of the students from this sample size are giving a history of migraine. Family history of migraine is noted in 45% of students from this sub-group. The duration of migraine history is between 1-5 years in nearly 62% of them with duration of 1-5 hours and occurring at a frequency of one episode per week in the maximum number of students with a history of migraine. 58% of the students experienced an aura preceding the migraine attack, while 42% of the students had no preceding aura. Lack of sleep, examination and physical stress and psychological factors (anxiety, depression, anger) constituted the main triggering factors for the migraine attacks. Conversely, adequate sleep, rest, medication (analgesics) and coffee were the salient relieving factors. The students were suffering from mild to moderately severe migraine predominantly, while not many of them had severe migraine. Associated illness in the form of anxiety, allergic rhinitis and polycystic ovarian disease was noted in some of the students with migraine. Medical advice for the migraine was obtained by a very small number of the students.

Conclusion: Headache of migraine can have a detrimental effect on a student's life both personally and professionally. Measures avoiding triggering factors, prophylactic drug treatment and launching of migraine awareness programs at high school levels would all be greatly beneficial in alleviating the student's headache and halting its progress to a chronic illness; thereby influencing a student's quality of life remarkably

Keywords: Migraine • Triptans • Headache • Spine • Neurostimulator

Introduction

Migraine presents as a pulsatile, throbbing type of headache with poorly understood etiology. It is reported in 10%-15% of worldwide population, has a familial occurrence and is more common in women [1]. Headache has a tremendous impact on a person's life. The episodic form of migraine if not properly treated can transform to chronic form [2]. Patients with severe migraine report one to five attacks per month of moderate to severe unilateral pain. It is often accompanied by nausea, vomiting, and extreme sensitivity to light and sound. Migraine attacks can last for hours to days and the headache significantly affects quality of life resulting in considerable health care costs. Migraine almost certainly has a genetic basis, but environmental factors play a significant role in its occurrence. Management of headache involves avoidance of triggers of headache (alcohol, chocolate, and stress) and use of abortive treatments as well as prophylactic therapy for acute headache in patients with frequent or severe migraine [3].

Prevalence of migraine in university students has shown to vary from 12.6%-48% [4]. Students form one of the most common victims of stress in

the general population.

Stress also depends on the level of education of the students. Medical education involves a college study of not less than five years. Medical students are exposed to a high level of stress during their medical training and are overloaded with tremendous amount of information. Several studies related to migraine have been performed on medical students as the target population. However, there is a scarcity of the data on headache epidemiology in UAE and the current study was conducted as the first epidemiological study to evaluate migraine and its associated factors among medical students in Dubai medical students.

Material and Methods

A cross sectional questionnaire based study was undertaken for three months between December 2020 and February 2021, in Dubai Medical College for Girls, UAE. The students from the first to the final year of MBBS (n=147) participated in the anonymous survey after prior consent and approval from the Research and Ethical Committee at Dubai Medical College. The questionnaire included the demographics, trigger factors, relieving and exacerbating factors, associative illness, family history, duration and severity of migraine to analyze its prevalence among medical students.

Results

This study includes a sample size of 147 students from first to the final year in Dubai Medical College for Girls, UAE. 37% of the students from this sample size are giving a history of migraine (Table 1).

***Address for Correspondence:** Tasneem Sandozi, Department of Pharmacology, Dubai Medical College, UAE, Email: tasneemsandozi@yahoo.com

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Table 1: History of Migraine

History of Migraine	n	Percentage of Students
n=147		
Positive history	55	37.4 %
Negative history	92	62.6%

Family history of migraine is noted in 45% of students from this sub-group (Table 2).

Table 2: Family History of Migraine

Family history of migraine	Percentage	Percentage of Students
n=55		
Positive	45% (25)	37.4 %
Negative	29% (16)	62.6%
Not Sure	25 % (14)	62.6%

The duration of migraine history is between 1-5 years in 62% of them with duration of one to five hours and occurring at a frequency of one episode per week in the maximum number of students with a history of migraine (Table 3).

Table 3: Duration of Migraine History

n=55	
<1 year	40 % (22)
1-5 years	32% (26)
6-10 years	10 % (5)
11-15 years	7% (2)

58% of the students experienced an aura (nausea/vomiting, sensitivity to light and sound, vertigo, flashes of light) preceding the migraine attack, while 42% of the students had no preceding aura (Table 4).

Table 4: Migraine Associated with Aura

Students with preceding symptoms	Students without preceding symptoms
n=55	
58.2% (32)	41.8 % (23)
Vomiting, nausea, photophobia, phonophobia, vertigo, flashes of light	

Lack of sleep, examination and physical stress and psychological factors (anxiety, depression, Anger) constituted the main triggering factors for the migraine attacks. Conversely, adequate sleep, rest, medication (analgesics) and coffee were the salient relieving factors (Figures 1 and 2).

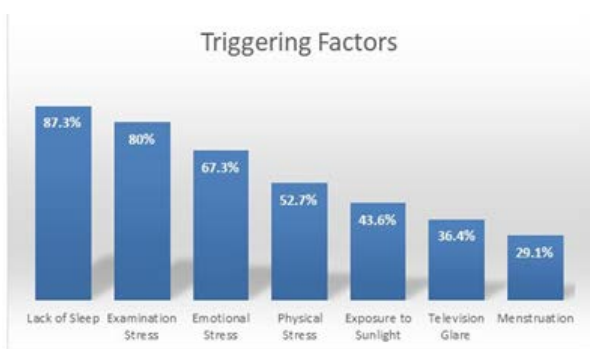


Figure 1: Conversely, adequate sleep, rest, medication.

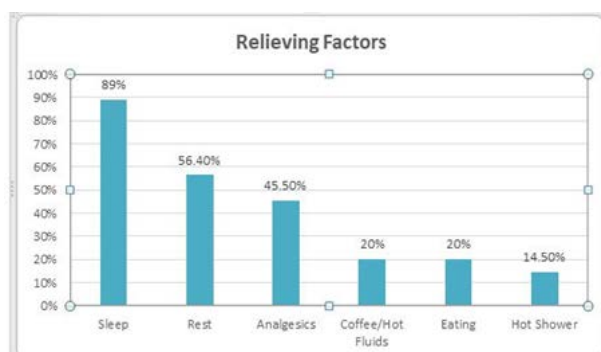


Figure 2: Coffee were the salient relieving factors.

The students were suffering from mild to moderately severe migraine predominantly, while not many of them had severe migraine (Table 5).

Table 5: Severity of Migraine

Mild	
<1 attack per month, lasts up to 8 hours, no incapacitation	47.3% (27)
Moderate	
One or more attacks per month, lasting 6 – 24 hours, mild incapacitation with prominent nausea/vomiting	40% (22)
Severe	
2-3 or more attacks per month, lasting 12-48 hours (about 2 days), associated with vertigo, vomiting & other symptoms incapacitation present during attack,	12.7% (6)

Associated illness in the form of anxiety, allergic rhinitis and polycystic ovarian disease was noted in some of the students with migraine (Table 6).

Table 6: Associated Illness with Migraine

n=55	
Anxiety	80 %
Allergic rhinitis	46.7%
Bronchial asthma	13.3%
Epilepsy	1.36%

Medical advice for the migraine was obtained by an exceedingly small number of students (Table 7).

Table 7: Students Seeking Medical Advice for Migraine

n=55	
No	84.4%
Yes	15.6%

Discussion

Our study shows 37% of medical students studying in Dubai Medical University to be suffering from migraine which is comparable to previous studies showing prevalence between 33%-98% in medical students and having a preponderance of female students too [4-8]. The difference might relate to low or no alcohol use in UAE, compared to other countries.

Migraine headaches are of two main types and can occur with or without

aura. The headache in both types is similar and women are affected three times more than men [9]. It is noted that majority of the students (75%) had migraine without any preceding aura and only 25% of the migraine cases were accompanied by aura comprising of photophobia, phonophobia and vomiting which is consistent with the previous studies [10]. Vertigo was reported in a small percentage of students as an associated symptom which raises the possibility of vertiginous migraine [11]. Vestibular migraine is the second common cause of vertigo and a common cause of vertigo.

Anxiety was the prominent associated illness followed by allergic rhinitis in the affected students. Anxiety and mood disorders have been shown to be the most relevant psychiatric comorbidities associated with migraine, influencing its clinical course, treatment response and clinical outcomes. Previous studies have shown lack of ability to properly control worrying and to relax as the most prominent issues in migraine psychiatric comorbidity [12]. Studies have shown a high prevalence of migraine headaches in patients with allergic rhinitis compared to those without. Histamine and other allergic mediators could play a key role in the pathogenesis of migraine headaches by way of vasodilatation and inflammation. This study has also demonstrated an association between allergic rhinitis and migraine in a small group of the affected students [13].

The duration of history of migraine is reported to be between one to five years in a predominant number of the subgroup. This indicates that the symptoms of migraine would have started to appear in the students during their high school or immediately after commencement of their medical education as the study sample included medical graduates from the first to the final year. This implies the significant role of stress responsible for the migraine, as during this phase of their life they worry about meeting academic demands, pleasing parents and teachers, and keeping up with their classmates.

Majority of the students of this study were suffering from mild to moderately severe migraine. Conversely, severe headaches were observed in only a few of the students. Lack of sleep, stress and exams were the major factors responsible for the initiation of migraine attacks. Studies have demonstrated sleep disruption to be a trigger of migraine attacks, which are improved with sufficient restful sleep. Typically, people with chronic migraine are prone to morning headaches due to insufficient sleep [14]. Stress due to any cause (emotional/examination) can be a triggering factor for migraine. Stress cannot be avoided during student life; however, it must be kept under control. Measures like proper diet, exercises, time management, positive attitude and taking a break can be very helpful in relieving stress which is also observed in our study.

Family history of migraine is markedly noted in this study. Migraine headaches generally show a multifactorial inheritance pattern, but the specific nature of the genetic influence is not yet completely understood. Approximately 70% of patients have a first degree relative with a history of migraine. The risk of migraine is increased four-fold in relatives of people who have migraine with aura [14].

Conclusion

Headache of migraine can have a detrimental effect on a person's life both personally and professionally. Students with mild to moderately severe

migraine constituted the preponderant group of students in this study. Measures like sufficient sleep, time management, proper diet, exercises, can be very beneficial in alleviating their headache and halting its progress to a chronic illness; thereby influencing students' quality of life remarkably. Prophylactic treatment with triptans, beta blockers, antidepressants, as well as launching of migraine awareness programs at high school levels would also exert a favorable influence on the students' academic as well as social life and would go a long way in bringing down the frequency and severity of the migraine attacks.

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