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EVALUATING THE RESULTS OF PREVALENCE MIGRAINE HEADACHE OF PATIENTS IN THI-QAR

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Abstract: Background: Migraine headache is a very disabling disease with a great impact on the patient's quality of life and interference in his personal, social, work, and family spheres. **Objective:** The aim of our study was to assess the prevalence of migraine headaches in Iraqi patients in Thi-Qar. **Patients and methods:** 160 migraine headache patients were recruited. They were aged between 20 and 40 years, and their demographic and clinical data were collected in hospitals in Thi-Qar - Iraq, during a period from 9 July 2022 to 19 April 2023. We administered a questionnaire using the ID Migraine Scale to screen for migraine in people who participated in this study. Our study assessed the severity of migraine and its impact on patients, and also conducted a questionnaire to assess the quality of life and health of migraine patients using the 36-item Short Form Survey (SF-36). **Results:** The findings revealed that patients aged between 20 and 30 years constituted 70% of the total, with females accounting for the majority (120 cases) compared to males (40 cases). The rate of smokers was 32.5%, while a family history of migraine was 55%. Stress was also a significant factor, with 72% of patients reporting this as a trigger. The prevalence of fasting was 67.5%, hunger was 65%, and migraine type included chronic (16 cases) and episodic (144 cases). The severity of migraine was classified as mild (4 cases), moderate (120 cases), and severe (32 cases). The most common site prevalence in patients with migraine was as follows: The headache was unilateral in 72 cases. Those with a high quality of life exhibited high emotional well-being (65.40 ± 13.50), high social function (62.40 ± 17.60), and high physical function (62.98 ± 9.64). **Conclusion:** Teenagers, with a majority of females, are more susceptible to migraines, that impacts their performance in their daily activities.

Key words: Migraine prevalence; Symptoms; Headache; Risk factors and quality of life.

Introduction

Migraine is a disease with a considerable medical, social, and economic impact. It mainly affects patients between 20 and 50 years of age, with a female predominance (18% women, 8% men) [1]. In Irland, in 2010, it was the sixth cause of years lived associated with disability. The World Health Organization (WHO) reports in its 2017 study on the prevalence of migraine that 47% of the world's population suffers from migraine as a condition of the central nervous system [2]. In Western countries, the prevalence of this disease reaches 12%, while in Latin America and the United States (USA), the prevalence figures in women reach 18% and in men 6%. It is notable that the female group is the most affected. [3]

The International Headache Society defined migraine in 2004 as a unilateral, pulsating, episodic headache of moderate or severe intensity that is aggravated by physical activity, is associated with nausea, vomiting, photophobia, or phonophobia, and is relieved by triptans when administered at the onset of symptoms. [4,5]

Migraine headache is a neurological disorder characterised by the presence of a painful crisis of a pulsatile nature, with a frequency of between three and six crises per month and a constant duration of up to 4 to 72 hours [6]. It is the second most common headache disorder and the third most common cause of disability worldwide [7]. In the second phase (aura), which occurs in 40% of cases, there is evidence of visual, sensory, motor, and speech dysfunction. The headache is unilateral, pulsating, or

throbbing and usually lasts between 4 and 72 hours, with changes in sleeping and eating habits being the triggering factors. [8]

Migraine headache is a pathology that causes disability and a progressive deterioration in quality of life [9]. In this regard, Germany reports that 31.3% of patients have more than three attacks per month, of which 53.7% require bed rest and at least one day of absence from work. Hu, in 2003, reported losses of 8 days/quarter, three days of actual absence plus five equivalent days due to reduced efficiency at work, which equates to 32 days lost per year due to migraine crises. [10]

Migraine headache is the third most common disease in people under the age of 50 worldwide [11]. The most common triggers of migraine attacks are genetic causes, stress, anxiety, dehydration, some foods and drinks, light, temperature, and strong odours [12]. In this sense, migraine should be understood as a disease that reduces the quality of life of the population, and the groups most likely to suffer from it are those exposed to stressful environments, such as students, and, with greater attention, those studying at higher levels. [13]

Chronic exposure to work stress causes anxiety, depression, difficulty making decisions and concentrating, fatigue, muscle tension, and changes in eating habits and sleep patterns, which are triggers for migraine crises [14]. These changes have been well documented in junior doctors who work night shifts in addition to their day jobs and who see more than 20 patients a day. [15]

Patients and methods

We conducted a cross-sectional study of patients with migraine headaches, including 160 cases. Patient data were collected from hospitals in Thi-Qar, Iraq, using a convenience sampling approach. The study was conducted between 9 July 2022 and 19 April 2023. Participants with a history of neurological disease and those who did not complete the questionnaire were not included in our analysis. Participants who were adult Iraqi women and men aged 20–40 years, and residents of Iraq met the inclusion criteria; those who were not within the age range were excluded. Gender, age, body mass index (underweight, normal weight, overweight, and obesity), employment, income level, education level, smoking status, family history of migraine, and symptoms were among the demographic and clinical data.

A 3-item ID migraine test was used to measure migraine symptoms. Participants were then separated into groups upon whether they were suffering from migraine headaches. The number of headaches each month and the factors that trigger them (stress, hunger, weather, difficulty sleeping, lighting, scent, neck pain, menstruation, a fasting state of chocolate, coffee, and aged cheese) were inquired about by participants who suffered of migraines.

The numeric pain rating scale (NPRS), an 11-point numerical scale with values ranging from 0 indicating "no pain" to 10 representing the "worst pain imaginable," was used to determine the intensity of the headache. Utilizing the 36-item short forms survey (SF-36), the quality of life and health of migraine sufferers and the general population were assessed. Physical functioning, physiological pain, role constraints caused by physical health issues, role limits owing to personal or emotional difficulties, emotional well-being, social functioning, energy/fatigue, as well as general wellness reactions comprised the eight domains tackled by the 36 items on the SF-36. A total score ranging from 0-100 was assigned to each SF-36 domain; a score of 100 indicated the highest quality of life in regard to health, whereas a score of zero indicated the lowest.

Results

Table 1: Demographic and clinical data related to patients with migraine headaches.

Features	Number of patients [160]	Percentage [%]
Age, years		
20 – 30	112	70%
31 – 40	48	30%
Sex, n (%)		

Male	40	25%
Female	120	75%
BMI, [Kg/m2], n (%)		
Underweight	24	15%
Normal weight	36	22.5%
Overweight	46	28.75%
Obesity	54	33.75%
Education status, n (%)		
Secondary school or less	40	25%
Diploma	48	30%
Bachelor	56	35%
Master or above	24	15%
Occupation, n (%)		
Student	48	30%
Non-employee	72	45%
Employee	40	25%
Income level, $, n (%)		
< 500	96	60%
501 - 700	48	30%
> 700	16	10%
Smoking		
Yes	52	32.5%
No	108	67.5%
Family history of migraine, n (%)		
Yes	88	55%
No	72	45%

Table 2: Identify parameters of triggering stimulus for patients with migraine headaches.

Characteristics	Number of patients [160]	Percentage [%]
Stress		
Yes	116	72.5%
No	44	27.5%
Hunger		
Yes	104	65%
No	56	35%
Weather		
Yes	88	55%
No	72	45%
Sleep disturbances		
Yes	70	43.75%
No	90	56.25%
Lights		
Yes	74	46.25%
No	86	53.75%
Perfume		
Yes	52	32.5%

No	108	67.5%
Neck pain		
Yes	56	35%
No	104	65%
Menstruation		
Yes	48	30%
No	112	70%
Fasting		
Yes	108	67.5%
No	52	32.5%
Coffee, chocolate, aged cheese		
Yes	68	42.5%
No	92	57.5%

Table 3: Determination of clinical outcomes regarding to diagnostics data of migraine headache.

Items	Number of patients [160]	Percentage [%]
Migraine type		
Chronic	16	10%
Episodic	144	90%
Severity		
Mild	8	5%
Moderate	120	75%
Severe	32	20%
Site		
Unilateral	72	45%
Bilateral	32	20%
Generalized	24	15%
Periorbital	16	10%
Occipital	6	3.75%
Frontal	10	6.25%
Associated features		
Photophobia	136	85%
Nausea	120	75%
Light-headedness	72	45%
Vomiting	64	40%
Vertigo	88	55%
Duration of occurrence of symptoms (years)		
<1	16	10%
1 - 4	112	70%
> 4	32	20%

Table 4: Assessment of quality of life in correlation with migraine headache.

Items	QoL scores
Physical function	62.98 ± 9.64
Role limitation due to physical health	50.62 ± 12.75
Role imitation due to emotional problems	39.77 ± 13.68
Energy and fatigue	46.83 ± 12.65
Emotional well being	65.40 ± 13.50

Social function	62.40 ± 17.60
Pain	60.53 ± 23.73
General Health	58.80 ± 15.66

Table 5: Identify the correlation among patients with migraine headaches and its severity with daily performance.

	Low daily performance	
	(r) coefficient	**P - value**
Patients with migraine	0.564	0.001
Severity of migraine headache	0.258	0.002

Discussion

According to some more studies, the prevalence of migraine is lower in groups consisting of Asian, African, European, as well as American. Since women are more inclined than males to be affected from migraine headaches, this could have been explained by differences in methods of research or by the 75% female predominance within our group. A further rationale could be because the incidence of migraine is rising in Iraq. Of the symptoms associated with headache episodes in the current study, photophobia comprised 85% of the instances. On the contrary, nausea was found to be the most prevalent symptom before, during, and following migraine episodes in an investigation conducted in Italy. [16,17]

A previous study performed out in the USA discovered that 84.1% of the patients had migraine headaches as a result of sleep deprivation, and 73.2% suffered headaches due to anxiety. These results confirmed the notion of stress and anxiety were the most prevalent causes for migraine headaches. [18]

Based on this study, the risk of migraine headaches was greatest among individuals with a diploma (30%) and was maximum among those with a bachelor's degree (35%). These results indicated an association between greater levels of education and a greater incidence of migraine headaches. These results matched those of prior studies, and the connection might have to do with students' exposure to stress and worry, that is known to activate the processes that cause headaches. In contrast, [19] a French study found that there was no discernible difference in smoking habits between people with migraines and healthy individuals. On the other hand, a Norwegian study demonstrated a noteworthy distinction between both groups.

However, there are a number of factors related to cigarette smoking that can lead to headaches, including changes in the brain's nitric oxide levels, a decrease in monoamine oxidase activity, vascular alterations caused on by anoxia induced by carbon monoxide, and an increase in the metabolism of prevalent headache medications that lowers their clinical effectiveness. In addition, one should take into consideration the potential of reversed causality, whereby smoking gets triggered in a headache. Therefore, our study showed that 32.5% of the patients smoking. [20]

In all eight of the study's QoL dimensions, people with migraine headaches differed significantly from normal participants in the QoL assessments. The domains most affected were restrictions caused by role imitation carried through mental disorders, limitations resulting in energy and exhaustion, and limitations resulting from physical illnesses. [21]

These results are in accordance with those of a study carried out in Riyadh that used a QoL questionnaire specific to migraineurs as well as found that migraineurs' quality of life is negatively affected in a variety of domains, including leisure activities, connecting with family and friends, socializing, feeling energised, experiencing frustration, carrying out and focusing on daily tasks at work or in the home, feeling like a burden with others, and feeling like they let others down. [22]

Another research conducted in Malaysia using a different instrument to measure quality of life (QoL) revealed that migraine sufferers had poorer overall ratings than healthy controls, with the lowest scores being for psychological and physical health [23]. These findings have been confirmed by another

research. Furthermore, among individuals with persistent daily headaches, those having migraine headaches scored the lowest, based on a comprehensive evaluation utilizing the SF-36. Because migraines are persistent, people suffer in between episodes as well, feeling anxious and afraid of future attacks.

They thus frequently cut down on their regular activities in an effort to avoid having headaches, which lowers their quality of life. Additionally, individuals with migraine may go misdiagnosed for an extended period of time, which might hinder their ability to take preventative measures or identify the triggers that increase the frequency of attacks, both of which could have a negative impact on their quality of life. [24]

Conclusion

Although it is often thought of as an adult disease, however, headache is a common disease in the adult population, but it is very common in young people, which its negative impact on lifestyle is enormous. Sleeplessness has been found to be the main trigger. They also suffer more from migraines than people in good health.

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