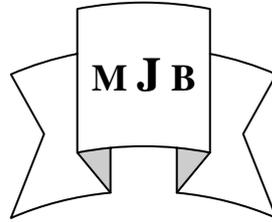


Prevalence of Headache and its Relation to Absenteeism among a Sample Paramedical Students in Baghdad-Iraq

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Abstract

Background: Headache is a world-wide problem that affects all ages, headache occur more in girls. Headaches can vary in frequency and severity of pain, some individuals may experience headaches once or twice a year.

Objective: The aim of this study is to determine the prevalence rate of headache and its relation to absenteeism among paramedical students in technical medical institutes in Baghdad –Iraq.

Subjects and materials: study design is cross-sectional study.

Setting: This study was conducted from December 2010 to April 2011. The students ages ranged from 18 to 24 years.

Sample Size: Total sample of 500 students, selected as statistic convenient .

Results: The most common symptoms that occurred before headache were blurred vision 33.7%. The most common type of headache was described as sever headache 41.4% and unilateral 26.5%. The factor relieving of headache was rest 34%. The Absenteeism due to headache was 29.4%.

Conclusion: The present study showed that the prevalence of headache was 85.1%. in the age group less than 22 years. It was higher among female students (83.4%) in comparison to males (82.3%). The students had more daily headache attacks 22%. The current study indicated that absenteeism among students due to headache was significantly associated with positive history of severe headache, positive history of unilateral headache and less frequent (weekly/ monthly/ variable) headache compared to daily attacks, but not significant statistically with gender, age and positive history of severe headache.

Keywords: Headache, paramedical students, absentees.

الصداع وعلاقته بالغياب بين طلبة المعاهد الطبية التقنية-بغداد-العراق

الخلاصة

الهدف: الهدف من الدراسة هو معرفة وجود وانتشار الصداع وعلاقته بالغياب بين طلبة المعاهد الطبية التقنية-بغداد-العراق.
الطريقة: هي دراسة وصفية للفترة من شهر ديسمبر ٢٠١٠- ابريل ٢٠١١، اعمارهم كانت بين ١٨ سنة الى أكثر من ٢٤ سنة، شملت الدراسة ٥٠٠ طالب وطالبة من المرحلة الاولى والمرحلة الثانية في هذه المعاهد، جمع العينات كانت بطريقة اختيارية
النتائج: أكثر العلامات السريرية عند حصول الصداع هي تشوش الرؤيا بنسبة ٣٣,٧% من أكثر انواع الصداع عند الطلبة هو الصداع الشديد بنسبة ٤١,٤% والصداع النصفي بنسبة ٢٦,٥%، أكثر العوامل التي تقلل نوبات الصداع هي الراحة ٣٤%، كان الغياب بسبب الصداع لدى الطلبة هو ٢٩,٤%.

الاستنتاج: أوضحت هذه الدراسة ان معدل حصول الصداع بين الطلبة كان ٨٥,١% ويحصل في العمر أقل من ٢٢ سنة بنسبة ٨٥,١%، ويحصل الصداع لدى الطلبة يومياً بنسبة ٢٢%، الغياب بسبب الصداع ليس له علاقة بالعمر والجنس والصداع الشديد، لكن الغياب بسبب الصداع يحصل مع تشوش الرؤيا والصداع النصفي.

Introduction

Headache is common with a lifetime prevalence of over 90% of the general population,

headache disorders are generally classified as either primary or secondary[1]. Headache disorders are generally classified as either primary

or secondary, primary headache disorders are not associated with an underlying pathology and indicate migraine, tension type, and cluster headache, secondary headache disorders.[2] Headaches can vary in infrequency and severity of pain, some individuals may experience headaches once or twice a year, while others may experience headaches more than 15 days a month, some headaches may recur or last for week at a time, pain can range from mild to disabling and may be accompanied by symptoms such as nausea or increased sensitivity to noise or light, depending on the type of headache[3]. Most headaches are of the tension type which have been associated with muscle tension, stress anger, anxiety and fatigue, and are characterized by mild to moderate, non-pulsating bilateral pain, the pain may begin in the front of head or back of the neck[4]. Headache is one of the most important medical issues in women's health, as it is more common in women than men, headache is much more common in American women than men, for example 18% of women have migraine, 6% of men[5].

Migraine is a disabling illness, students who experienced migraine were not able to attend for many days in year, recurrent headache can limit activity, worsen with activity, affect performance and lead to frequent absence from institutes[6]. Most adolescents (90%) who have migraines, may have positive family history[7]. Migraines headaches, are more common in girls than in boys[8]. A migraine is usually an intense pounding headache with nausea that occur from time to time, the pounding or pulsing pain usually begins in the fore head, the side of the head or around the eyes[9]. Migraine is a common chronic neurological disorder that affects 11% or more of the adult population[10].

Absenteeism was the number of days missed or interrupted for migraine and headache reasons. Recurred headaches and migraine lead to frequent absenteeism[11]. The students who missed 2 or less days of school due to headache and migraine was low absenteeism were compared with those who missed more than 2 days was high absenteeism[12].

Objectives

The aim of this study is to determine the prevalence rate of headache and its relation to absenteeism among paramedical students in technical medical institutes in Baghdad –Iraq.

Methods

Ethical approval was obtained from local ethics committee prior to commencement of the study, an informed consent was secured from each study participant, a cross-sectional survey was conducted at the medical institutes in Baghdad-Iraq from December 2010 to April 2011. The total sample size was 500 students selected as convenient sample during 2010 to 2011 were invited to participate in the study by filling a questionnaire. The questionnaire was translated from its original English language into Arabic by the principal investigator. It was then validated by a panel of three experts in community medicine and neurology. The questionnaire was derived from International Headache Society (IHS)[10]. It was written in Arabic, and included demographic information as well as detailed questions regarding frequency of headache attacks, the severity of headache is confirmed by loss of vision or speech problems or muscles weakness, unilateral headache, frequency of having headache in previous year, signs and symptoms associated with headache and general knowledge of the consequences of

headache and the names were not required. The survey was conducted using self administered questionnaire form, all variables included in the questionnaire form reflected the personal opinion of the student, no data were obtained from institutional records. Operational definition of study variables, the principal outcome variable in the present study was headache. The strength of association between two categorical variables in a cross-sectional study design was assessed by Odd's ration (OR). The log method was used to compute the 95% confidence interval for Odd's ration. The statistical significance of association between two categorical variables was assessed by Chi-square test. The Odd Ratio (OR) test was considered. Statistical analysis was done by the Statistical Package for Social Sciences (SPSS) version 20. The level $P < 0.05$ was considered as the cut-off value for significance.

Results

Headache was reported by 158 (82.3%) of males and 257 (83.4%) of females. And by 85% of those less than 18 years and 80.1% of those more than 24 years. Daily headache attack was reported by 29.9% as shown in table 1. headache shows various characteristics, family history of headache was reported by 42.7% of the sample. Blurred vision was the most common symptoms preceding the attack (35.6%).

Sleep was the common most relieving factor from headache 36.9% and rest 34% as shown in table 3. Three predictors had an important and statistically significant impact on the risk of absenteeism. A positive history of blurred vision as associated symptom significantly increased the risk of absenteeism by 2 times compared to those with no history of blurred vision, after adjusting

(controlling) for the confounding effect of the remaining 5 explanatory variable included in the model as shown in table 4. A positive history of unilateral headache significantly increase the risk of absenteeism by 80% compared to those with no history of unilateral headache, after adjusting (controlling) for the confounding effect of the remaining 5 explanatory variables included in the model. A less frequent (weekly/ monthly/ variable) headache attacks significantly increased the risk of absenteeism by 70% compared to those with daily attacks after adjusting (controlling) for the confounding effect of the remaining 5 explanatory variables included in the model. Being a male or an older age group will increase the risk of absenteeism by an average amount, which was not significant statistically. Having a severe headache had no important or statistically significant on the risk of absenteeism, after adjusting (controlling) for the confounding effect of the remaining 5 explanatory variables included in the model, as shown in table 4.

As shown in table 4, six selected characteristics of subjects were tested for their net and independent effect on deciding the risk of absenteeism due to headache using a multiple logistic regression model. These predictors were: Male gender compared to females, Older age (22+) compared to <22 years age, Less frequent (weekly/monthly/variable) headache attacks compared to daily attacks, Positive history of blurred vision as associated symptoms, Positive history of Severe headache, Positive history of unilateral headache.

The model was statistically significant with an overall prediction accuracy of 70%. Three predictors had an important and statistically significant impact on the risk of absenteeism. A positive history of

blurred vision as associated symptom significantly increase the risk of absenteeism by 2 times compared to those with no history of blurred vision, after adjusting (controlling) for the confounding effect of the remaining 5 explanatory variables included in the model. A positive history of unilateral headache significantly increase the risk of absenteeism by 80% compared to those with no history of unilateral headache, after adjusting (controlling) for the confounding effect of the remaining 5 explanatory variables included in the model. A Less frequent (weekly/monthly/variable) headache attacks significantly increase the risk of absenteeism by 70% compared to those with daily attacks, after adjusting (controlling) for the confounding effect of the remaining 5 explanatory variables included in the model.

Being a male or an older age group will increase the risk of absenteeism by an average amount, which is not significant statistically (P. value 0.09). Having a severe headache had no important or statistically significant effect on the risk of absenteeism, after adjusting (controlling) for the confounding effect of the remaining 5 explanatory variables included in the model (table 2).

Discussion

Headache is a subjective complaint without any specific laboratory correlate.[13] The present study showed that 83.4% of the paramedical students who suffer headache attacks were females due to hormonal changes, this finding was in agreement with a study conducted by Lipton, 2003 in US (86%) [14]. Although the present study has its own limitation when it come to age since all study participants were students with age ranging between 18 and 25 years. It was shown that headache was more common in age less than 22 years. This

findings is different from a study done by Lisa, (2002), United States were more than 22 years.[15] The results of the present study showed that the most common associated symptom for headache was blurred vision 31.8%, this finding was lower that the proportion of (56.6%) reported by Bener (1998) in Arab Emirates [16]. The present study showed that sleeping was the relieving factor of headaches, this finding differs from results stated David, United States (2003) as medication was the relieving factor[17].

In the present study it was found that a positive history of blurred vision as associated symptom significantly increased the risk of absenteeism, this finding was similar to a study done by Siverstein in united states 2008 [18]. Blurred vision is one of the significant symptoms of migraine reflecting severe attack of headache, which is expected to encourage a person to defer from attending teaching courses and prefer to be labeled as absenteeism.

Conclusion

The present study revealed that frequent headache is significant problem for Iraqi paramedical institutes students. It is more common in female students with blurred vision as an a associated symptom, and unilateral, severe headache and less frequent headache .

Recommendation

An Education programs include identifying and recording what triggers your students' headache, such as lack of sleep, not eating at regular times, eating certain foods or additives, caffeine, environmental or stress, these programs increase awareness about the importance of headache as a disabling symptoms that may affect the performance of students is recommended.

Table 1 The relative frequency of positive history of headache during the past year by selected independent variables

	Total N	No. of headache N	%	OR	95% Confidence interval of OR	P-value
Age group (years)						
<22	275	234	85.1	Reference		
22+	225	181	80.4	0.72	(0.45 - 1.15)	0.17[NS]
Gender						
Male	192	158	82.3	Reference		
Female	308	257	83.4	1.08	(0.67 - 1.75)	0.74[NS]

P-value <0.05 is significant and >0.05 is non significant.

Table 2 The relative frequency of Absenteeism due to headache by selected independent variables

	Total N	No. of absenteeis m N	%	OR	95% Confidence interval of OR	P-value
Age group (years)						
<22	234	61	26.1	Reference		
22+	181	61	33.7	1.44	(0.94 - 2.2)	0.09[NS]
Gender						
Male	158	54	34.2	Reference		
Female	257	68	26.5	0.69	(0.45 - 1.07)	0.09[NS]
Severe headache						
No	243	68	28.0	Reference		
Yes	172	54	31.4	1.18	(0.77 - 1.8)	0.45[NS]
Unilateral headache						
No	305	83	27.2	Reference		
Yes	110	39	35.5	1.47	(0.92 - 2.34)	0.1[NS]
Count of headache ttacks						
Once	51	11	21.6	Reference		
Multiple	364	111	30.5	1.6	(0.79 - 3.22)	0.19[NS]
Frequency of headache attacks						
Daily	109	24	22.0	Reference		
Less frequent (weekly/monthly/variabl)	255	87	34.1	1.83	(1.09 - 3.09)	0.022
Associated symptoms						
None	103	23	22.3	Reference		
Abdominal pain	14	4	28.6	1.39	(0.4 - 4.85)	0.6[NS]
Nausea and vomiting	88	26	29.5	1.46	(0.76 - 2.8)	0.26[NS]
Blurred vision	132	47	35.6	1.92	(1.07 - 3.45)	0.027

Note: The total for these variables frequency of headache and associated by symptoms is less than the grand total of 415 because of

missing values for these two variables.

Table 3 Relative frequency of selected qualities or characteristics of headache among those reporting a headache attack in the past year.

Total with headache = 415	N	%
Severe headache	172	41.4
Unilateral headache	110	26.5
Absenteeism due to headache	122	29.4
Family history of headache	177	42.7
Aura (symptoms preceding the attack of headache) n=415		
	N	%
Absent	123	29.6
Blurred vision	140	33.7
Abdominal pain	16	3.9
Emotional changes	107	25.8
Joint pain	71	17.1
Relieving factors (n=415)		
	N	%
Rest	141	34.0
Sleep	153	36.9
Medication (pain killers)	98	23.6
Darkness	11	2.7
Don't know	61	14.7

Table 4 Multiple logistic regression model with the risk of absenteeism as the outcome (response) variable and selected explanatory (independent variables).

	Partial OR	P
Male gender compared to females	1.2	0.41[NS]
Older age (22+) compared to <22 years age	1.4	0.17[NS]
Less frequent (weekly/monthly/variable) headache attacks compared to daily attacks	1.7	0.042
Positive history of blurred vision as associated symptom	2	0.01
Positive history of Severe headache	1.1	0.65[NS]
Positive history of unilateral headache	1.8	0.035

Overall prediction accuracy = 70%

P (model) = 0.009

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