

Prevalence and Risk Factors of Headache and First Line of Intervention in Headache

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Abstract

Purpose of study: A headache is unpleasant sensation or pain in head which makes people very uneasy and disturbs their routine life. There are different risk factors for headache like tension, fatigue, lack of sleep and different first line of intervention like sleep, painkillers, caffeine intake. The purpose of this study is to determine the frequency of risk factors and different first line of interventions in headache.

Methodology: A descriptive cross-sectional study was conducted from January 2013 to June 2013. Samples of 200 people was recruited through purposive non-probability sampling technique. The details of risk factors and first line of interventions were recorded through a semi structured questionnaire. The descriptive analysis of data was made through SPSS 17.

Results: The result of study shows that 66.5% of people belonged to age group 20 to 29 years. The pain intensity was 45,45 and 10% belong to mild, moderate and severe pain respectively. Majority of people in this study have headache which is aggravated by tension 42.5%, lack of sleep 26% and fatigue 16% and most common first line of intervention in this study is sleep 31% and painkiller 28% and NSAIDS 17.5% while least common are herbal products and wrapping of cloth around head 3%.

Conclusion: It is concluded that most risk factors for headache are tension, lack of sleep, fatigue and cold and most common first line of interventions used are sleep, pain killers, NSAIDS, and caffeine intake. People with severe tension and lack of sleep are prone to experience severe headache.

Keywords: Headache; Risk Factors; First Line of Intervention; Intensity

Introduction

"A pain in the head with the pain being above the eyes or the ears, behind the head (occipital), or in the back of the upper neck" "A headache involves pain in the head that can arise from many disorders or may be a disorder in and of itself" [1]. A headache is a common symptom of many diseases like hypertension, malaria, mumps, neck pain, measles, dengue fever, chronic fatigue syndrome, postnasal drip, tetanus, smoking, chronic pain [2]. Globally it is estimated that prevalence of headache is 47% in adults which is symptomatic at least once in a last year. 1.7 to 4% adult population have headache on 15 or more days in a single month. Migraine has been reported by 10% of adults and by American council for headache Education (ACHE) it is reported in 4 - 10% children [3].

Most of the headaches do not result because of any underlying pathology; they occur because of stress or muscle tension, lack of sleep and many more. Now a day it is very common in every age group due to our tough routine work [4]. A study which was conducted in Fatima memorial college Lahore to find out prevalence of headache and its symptoms in medical students stated that most prevalent age of headache was 21 years and 82% students have headache which last less than one hour and 39% have headache which last from 1 to 4 hour. So, it shows how common headache is in our society and mostly in children [5]. Headaches are most common among children as study show that 74% girls and 54% boys have headache once in a month between 12 to 17 ages. 15 to 20% of adolescents are affected with tension headache. It mostly occurs in children after age of 10. Its ratio is equal in male and female before puberty but after puberty girls are three times more likely to have migraine because of hormonal changes [6].

Migraine headaches are common between the ages of 10 and 45. Sometimes they may begin later in life. Migraines occur more often in women than men with a 3:1 female to male ratio, may run in families approximately 90% of migraine patients have a positive family history. Some women, but not all, may have fewer migraines when they are pregnant [7]. Tension headache pain may last from 30 minutes to 7 days and it is mostly triggered by stress, tension, noise and glare. This type of headache mostly comes in day and worsens as time passes, it is called chronic if it exceeds from 15 days to 3 months. Its intensity increases from mild to moderate as day passes and its intensity differs from person to person and within a person in different episodes [8].

Antidepressants (amitriptyline or venlafaxine), beta blockers (propranolol) or calcium channel blockers (verapamil), seizure medicines such as valproic acid, gabapentin, and topiramate. triptans may relieve migraine headache [9].

Physical therapy can help patient to educate about poor posture, outcome of his bad posture, instruct home exercise program, ice packs, massage and passive mobilization can also be used [10]. Relaxation or stress-management training, biofeedback, cognitive behavioral therapy, or acupuncture, which may help relieve tension headache. Botox (botulinum toxin) is becoming popular as a treatment for chronic daily headaches, including tension headaches [11]. Positive thinking techniques, Yoga, Progressive muscle relaxation, Ways to manage your time may help prevent headaches [12].

Methodology

This is a Descriptive cross-sectional survey, which is conducted in Rawalpindi, Islamabad, Lahore and Faisalabad from January 2013 to June 2013. Total duration of this study was 6 months. The Sample Size was 200. The study was approved by ethical committee of Riphah College of Rehabilitation Sciences. Convenient non-probability sampling techniques was used and data was collected from common public. Sample selection was done on basis of inclusion and exclusion criteria. Individual with headache were included in inclusion criteria and other than headache are included in exclusion criteria.

Self-structured questionnaire was used. that majority of people complain of headache. Regular and proper sleep, painkiller and caffeine intake have a number of benefits for the relief of headache. But we have observed that tension is the major risk factor for onset of pain. People with severe tension and lack of sleep are prone to experience severe headache. The data were analyzed using SPSS version 17.

Results

The results of descriptive analysis are described in the tabulated and graphical representation. The important descriptions of statistical analysis are given here for evaluation. 132 out of 200 people are women, 68 out of 200 people are men. So, majority of people in this study are women. 133 out of 200 people belonged to age group 20 - 29. The majority of people 66.5% belonged to age group 20 - 29. 82 out of 200 people have headache once in a month, 66 out of 200 people have headache once in a week, 21 out of 200 people have experienced headache everyday while 31 out of 200 people have headache with unknown results. So, majority of people 41% in this study have headache once in a month.

Cross tabulation

The cross tabulation 1 shows that there is a relationship between age and gender that 104 out of 132 people who have headache are females while 29 out of 68 people with headache are males. So, majority of people in this study are females. 133% people belonged to age group 20 - 29 while 1% people belonged to age group 70 - 79. So, majority of people who have headache are in age group of 20 - 29.

		Count							
		Age							Total
		10 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	
Gender	Female	13	104	6	5	3	0	1	132
	Male	11	29	12	8	3	5	0	68
Total		24	133	18	13	6	5	1	200

*Cross Tabulation 1: Gender * Age Cross tabulation.*

Cross tabulation 2 shows that 85% of headache are aggravated by tension, 16% headache are aggravated by colds. So majority headaches are aggravated by tension.92% of headaches are relieved by sleep while 5% headaches are relieved by eating a meal. So, majority of headaches are relieved by sleeping.

		Count					
		Aggravating factors					Total
		Tension	Fatigue	Colds	Lack of sleep	Others	
Relieving factors	Sleep	37	22	5	26	2	92
	Eating a meal	0	2	3	0	0	5
	Relaxation	26	4	5	7	2	44
	Medication	21	3	3	16	6	49
	Others	1	1	0	3	5	10
Total		85	32	16	52	15	200

*Cross Tabulation 2: Relieving factors * Aggravating factors Cross tabulation.*

The cross tabulation 3 shows that 62% headaches are cured by sleeping, 3% headaches are cured by herbal products and wrapping of cloth around head. So, majority of headaches are cured by sleeping. 86% of people have studied from 2 - 4 hours while 24% have studied from 6 - 8 hours. So majority study duration is from 2 - 4 hours.

Discussion

David D Celentano, Martha S Linet, Walter F Stewart published an article named Gender differences in the experience of headache which supports our view of above mentioned point that women report higher rates of headaches which occur frequently and in frequently. Risk factors associated with headache were systematically greater for women than man. Women were more likely to report recent headache related disability and to seek health care services for their headaches [13]. Egilius LH Spierings MD, PHD, Anniek H Ranke BSc, Peter C Honkoop MSc published an article named precipitating and aggravating factors of migraine versus tension type headache which supports our study, that most common aggravating factor for migraine and tension type headache is stress/tension. They also examine

		Count					
		Duration of study					Total
		2 - 4 hours	4 - 6 hours	6 - 8 hours	More than 8 hours	No study	
First line of intervention	Pain Killer (Ponston)	22	9	8	8	9	56
	NSAIDs (Panadol)	10	8	4	2	11	35
	Caffeine intake	12	2	2	3	0	19
	Herbal products	3	0	0	0	0	3
	Sleep	28	12	7	13	2	62
	Head massage	2	1	1	0	1	5
	Relaxation therapy	6	1	1	1	2	11
	Wrapping of cloth around head	1	0	1	0	1	3
	Others	2	0	0	2	2	6
Total		86	33	24	29	28	200

Cross Tabulation 3: First line of intervention * Duration of study Cross tabulation.

other factors like lack of sleep, fatigue and weather but their ratio is less than tension as mentioned in our study so this study strongly supports our study [14].

Morris Levin MD also stated that caffeine have been used for acute relief of migraine and other headaches. Some studies supports its use for headache while others said that caffeine induction of hypoglycemia may trigger migraine and tension type headache. Ward., *et al.* in 1991 found in a DBRCT that caffeine appeared to have independent analgesic effect that were equivalent to acetaminophen and were still significant when statistical adjustments were made for prior caffeine consumption and caffeine’s effects on mood [15].

David W Dodick MD, Eric J Eross MD, James M. Parish MD, published an article clinical, anatomical and physiologic relationship between sleep and headache which nullifies our study that headache is cured by taking sleep in many people and used as 1st line of intervention in majority of people. This study stated that many headaches are caused by lack of sleep; these disorder may be associated with true sleep disorders. It is more unusual for headache disorders to cause disturbance in sleep. It stated that headache usually have a comorbid conditions like depression, anxiety, or analgesic overuse that Leads to disturbed sleep [16].

Conclusion

After the conduction of this survey, it is concluded that majority of people complain of headache. Regular and proper sleep, painkiller and caffeine intake have a number of benefits for the relief of headache. But we have observed that tension is the major risk factor for onset of pain. People with severe tension and lack of sleep are prone to experience severe headache.

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