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PREVALENCE OF DEPRESSION AMONG PATIENTS WITH PRIMARY HEADACHE AND SECONDARY HEADACHE.

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ABSTRACT… Headache is a very common condition worldwide and may have serious consequences on effective functioning of an individual. It may also lead to emotional consequences or may be a result of emotional burden. Psychiatric comorbidity is also very common among patients with headache. **Objectives:** The main aim of the study was to assess depression among patients presenting to neurosurgery OPD with chief complaints of headache. **Study Design:** Cross Sectional Study. **Setting:** Neurosurgery OPD of a Tertiary Care Government Hospital Mardan Medical Complex located in Mardan, Khyber Pakhtunkhwa. **Period:** September 2018-February 2019. **Material & Methods:** Patients presenting to neurosurgery OPD of Mardan medical complex, Mardan with chief complaints of headache were included in the study. Demographic information sheet was used to obtain important demographic information. Informed consent form was filled and signed from each participant. Hamilton Depression rating scale was used to assess symptoms of depression among the participants. **Results:** Most of the study patients 93 (74.4%) had primary headache, while 32 (25.6%) had secondary headache. The results of the study found that highest prevalence of depression was present among patients with tension type headache (88 %) as compared to migraine (78 %) and secondary headache (84 %). Moderate depression was present among 32 % of the study population, while 28 % had severe depression. **Conclusion:** These findings suggest that depression is very common among patients with headache. Primary health care practitioners should assess for symptoms of depression for better management of the course and prognosis of the patients presenting with complaints of headache.

Key words: Depression, Migraine, Primary Headaches, Secondary Headaches, Tension Type Headache.

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INTRODUCTION

Headache is one of the major causes contributing to lower down quality of life among patients.[1] It is also one of the most common complaints reported by patients at neurology and psychiatric clinics.[2] Correct diagnosis and treatment in clinical practice can help patients reduce pain and suffering and improve their quality of life.

In the IHS classification, headache is classified into primary headache and secondary headache. Primary headache is considered as functional and no specific cause for headache is known, and a secondary one which is of organic cause, metabolic or drug-induced origin.[3] Primary chronic headache most commonly includes migraine, tension-type headache, and cluster headache, while secondary chronic headache consists of chronic posttraumatic headache, headache due to infection, vascular headache and headache which is associated with substance use. Majority of patients presenting to health care providers with complaints of headache have a primary headache disorder. More growing clinical evidence has suggested that complaints of headache are very frequently observed among patients presenting with psychiatric disorders in general hospital psychiatric units.[2] Among psychiatric illnesses, evidence suggests that depression and anxiety are more associated to headache.[4] If accompanied by anxiety and depression, the intensity, frequency and duration of headache may increase making the person more vulnerable to increased recurrent headaches.[5,6]

Research suggest that frequency of headache also directly impacts psychiatric comorbidity. Chronic course of headache directly worsens psychiatric comorbidities including depression and anxiety in comparison to episodic headaches. Significant variations in quality of life are observed among patients with chronic headache and episodic headache.[1]

According to the 2010 Global burden of disease survey, migraine is the 3rd most prevalent disorder and the 7th highest cause of disability in the world.[7] Migraine involves headache attacks ranging between 4 and 72 hours. It is uni-lateral pulsating or throbbing pain of intensity from moderate to severe and is associated with nausea or vomiting or both photophobia and phonophobia.[8]

Several studies has demonstrated that the incidence of psychiatric disorders such as anxiety and depression is increased in people with migraine.[9,10,11]

Increased episodes of migraine could make a person at greater risk for developing depression and anxiety and may also worsen the symptoms of depression and anxiety.[12,13]

Tension-type headache (TTH) consists of headache in which the pain is commonly described as "a band around the head". The pain has at least two of the following characteristics: mild to moderate in intensity, occurs on both sides of the head (bilateral), and the pain is not worsened by routine activity (bending over or climbing stairs), and pain has a pressing or tightening quality and not throbbing or pulsing. It also accompanies nausea or vomiting.[14]

According to estimates TTH is the third most common disorder in the world.[15] Post-traumatic headache (PTH) is defined as the one which begins within seven days of Traumatic brain injury, and further is subdivided into acute form and chronic form, acute form is when pain disappears within three months of trauma, and chronic, when headache persists beyond this period.[16]

It is associated to psychiatric conditions like depression, and anxiety and leads to worse daily routine functioning than other primary headaches.[17]

Individuals who are more stable emotionally seem to adapt better to the trauma than anxious and depressive individuals; others may experience the emotional stress trauma for longer periods. Consequently, this increases the magnitude of posttraumatic symptoms, and limit patients' activities.[18]

The purpose of our study was to assess the prevalence rates of depression as a complication or cause of headache in outpatients with a chief complaint of headache in neurological clinic of a tertiary care hospital in Mardan. It has been largely observed in this region that majority of patients with headache complaints are undiagnosed and undertreated in routine out-patient department consultations. Therefore, the findings of this study will help physicians to understand and identify headache etiologies and improve treatment practices aimed for patients with complaints of headache.

MATERIAL & METHODS

This cross-sectional study was conducted at Neurosurgery out-patient department of a tertiary care Government Hospital Mardan medical complex located in Mardan, Khyber Pakhtunkhwa. The topic of the study was discussed in research committee meeting of the hospital and approval was given by ethics committee for data collection. The study was started in September, 2018 and ended in February 2019. Patients presenting to neurosurgery OPD with chief complaints of headache and those suspected to be having depression were screened for further detailed intake interview with psychologists for assessing depression and ascertaining the type of headache. All patients were asked for consent prior to obtaining data.

Patients with a chief complaint of headache, having age of 18 years to 65 years age were included in the study. Patients who had problems of loss of consciousness, problems with intellectual functions as (thinking, judgement,

and reasoning), patients who had epilepsy and those who disagreed to participate in the study were excluded.

Semi-structured interview was conducted to obtain demographic information, and to assess the type of headache and presence of depression.

Hamilton Depression Rating Scale was used to assess severity of symptoms of depression among patients presenting with complaints of headache. HAM-D is clinician rating scale widely used to assess severity of symptoms of depression in clinical trials. HAM-D includes 21 items designed to measures severity of depression among those diagnosed as depressed.[19]

RESULTS

Table-I includes details of demographic characteristic of patients. Among the 125 patients 44 were male and 81 were female. Majority of the patients 52 (41.6%) had tension type headache, followed by migraine 41 (32.8%), and post traumatic headache 32 (25.6%). Minimal depression was 20 (16%), mild depression 30 (24%), moderate depression 40 (32%), and severe depression 35 (28%).

Table-II demonstrates cross tabulation of depression and type of headache. Highest levels of depression were observed among patients with tension type headache followed by post traumatic headache and migraine. Patients lying in the range of moderate to severe depression were considered as depressed. Among the 41 patients with migraine, 19 (46%) lied in the range of moderate to severe depression. Among the 52 patients with tension type headache, 69% lied in the range of moderate to severe depression. Among the 32 patients with posttraumatic headache, 62.5 % lied in the range of moderate to severe depression.

	F (N=125)	%
Gender		
Male	44	35.2%
Female	81	64.8%
Marital Status		
Single	20	16%
Engaged	19	15.2%
Married	81	64.8%
Divorced	3	2.4%
Widowed	2	1.6%
Education		
Uneducated	66	52.8%
Primary	19	15.2%
Secondary	28	22.4%
Higher Secondary	10	08 %
Bachelors	02	1.6%
Profession		
Non-Working	80	64%
Working	45	36%
Family System		
Nuclear	58	46.4%
Joint	67	53.6%
Address		
Urban	29	23.2%
Rural	71	56.8%
Type of Headache		
Primary	93	74.4%
Secondary	32	25.6%
Primary type		
Migraine	41	32.8%
Tension Type	52	41.6%
Chronic Post traumatic	32	25.6%
Headache Duration		
15 days	28	22.4%
1 month	22	17.6%
2 months	19	15.2%
3 months	21	16.8%
4 months	12	9.6%
5 months and Above	23	18.4%
Drug Use		
Pain killers	46	36.8%
Benzodiazepines	14	11.2%
Cannabis	3	2.4%
Others	14	11.2%
No Drug Use	48	38.4%
Other Medical Illness		
Hypertension	16	12.8%
Diabetes	6	4.8%
Gastric issues	17	13.6%
Not present	86	68.8%
CT Scan		
Yes	38	30.4%
No	87	69.6%
Depression Scores		
Minimal Depression	20	16 %
Mild Depression	30	24 %
Moderate Depression	40	32 %
Severe Depression	35	28 %

Table-I. Demographic characteristics of participants.

	Minimal Depression	Mild Depression	Moderate Depression	Severe Depression	Total
Migraine	09	13	10	09	41 (32.8%)
Tension Type Headache	06	10	18	18	52 (41.6%)
Post Traumatic	05	07	12	08	32 (25.6%)
Total	20 (16 %)	30 (24 %)	40 (32 %)	35 (28 %)	125

Table-II. Percentage of Prevalence of Depression among patients according to type of Headache.

DISCUSSION

Headache is a serious problem and more widespread having impact on social and occupational functioning somehow. Our results show that migraine was present among 41 (32.8%) patients of the study population while tension type headache was present among 52 (41.6%) of the participants, post traumatic headache was present among 32 (25.6%) of the patients. Among the study participants, 44 (35.2%) were male, while 81 (64.8%) were female. Majority of the participants were married i.e. 64.8%.

A causal link has been increasingly recognized for the interaction between diseases causing headache and psychiatric disorders. Complaints of headache are frequently noted among patients presenting to psychiatric clinics. One similar study conducted among patients presenting with first episode of depression, complaints of headache were present among 68 % of the patients.[2]

It has also been observed that many psychiatric patients report only headache during a psychiatric disturbance. This was observed by a study that assessed patients who presented to primary care clinics with complaints of headache, it was found that one-third of those patients had moderate depression.[20] Yet another study noted major depressive episode present among 25.4% of patients presenting to primary care clinic with complaint of headache.[21] Similarly, Nimnuan et al. found the prevalence rates of depression to be 29.2% in patients with headache in a tertiary care facility.[22]

A bi-directional relationship has been observed among migraine and depression. It has been observed that each may increase the risk of the other.[12,23]

According to our results, among the 41 patients diagnosed with migraine, moderate depression was noted among 10 (24.3%) participants while 9 (21.9%) participants had severe depression.

A study conducted in Karachi to assess migraine among patients with depressive disorder found migraine to be present among 32.7 % of the depressed patients. The study further observed that severity of depression had direct relationship with migraine.[24]

Brazilian study aimed to find relationship between headache and migraine found a clear relationship between the two. They noted that migraine was more associated to depression as compared to other types of headaches. More-over it was found that the more severe the headache is, the more severe depressive symptoms are present.[25]

In our study we considered those patients to be depressed who scored to be in the range of moderately depressed and severely depressed according to Hamilton depression scale scores. According to the results highest prevalence of depression was present among patients with tension type headache. Among the 52 participants with tension type headache, 36 (69.2%) were noted to be depressed. Among the 41 patients with migraine, 19 (46.3%) were found to be depressed. Among 32 patients with post traumatic headache, 20 (62.5%) were found to be depressed.

Another study found no difference in the prevalence of depression among those patients having migraine and those with tension type headache.[25]

Previous studies also have shown a significant relationship between headache and depression.

Evidence show that depression acts as a risk factor for tension type headache.[26] A study conducted in Italy found prevalence rate of 36.9% of patients with tension type headache having depression.[27] Korean study found depression to be present among 4.2% of patients with tension type headache, although anxiety was present among 9.5% of the patients.[28]

CONCLUSION

Headache is a very common condition presenting to medical, psychiatric and neurology clinics these days. From our study and researches from past, it was observed that depression is a very common associated condition with headache. It is advised to health care professionals to rule out depression among patients presenting with complaints of headache, for the better management of this widespread disorder.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

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2	Asghar Ali	Data collection.	
3	Ejaz Gul	Write up and literature review.	
4	Pirzada M. Muneeb	Data analysis and write up.	
5	Sumaira	Data collection and Data analysis.	