ORIGINAL ARTICLE

PSYCHIATRIC COMORBIDITIES IN PATIENTS WITH HEADACHE DISORDERS IN PAKISTANI AND AFGHANI POPULATION

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ABSTRACT

Objective: To know the psychiatric comorbidities in patients with headache disorders in Pakistani and Afghani population.

Material and Methods: We reviewed and analyzed the data obtained through a semi-structured psychiatric interview from 8,890 patients who visited our clinic for treatment from July 2013 to July 2016. Two assessors made the diagnoses according to International Classification of Headache Disorders, 3rd Ed Beta (ICHD-3) for diagnosis of headache disorders, and ICD-10 Classification of Mental and Behavioural Disorders, Clinical descriptions and diagnostic guidelines for the diagnoses of comorbid psychiatric disorders. Association of headache types and symptoms of psychiatric disorders were analysed using Pearson chi square test, keeping alpha value less than .05.

Results: 13620(15.3%)of patients out of 8,890 had headache as one of their chief complaints. Migraine was diagnosed in 867(63.7%), tension-type headache in 204(15%), secondary headache in 55(4%), cephalagias in 33(2.4%). Symptoms of depression were present in 60.4% (n=822), Symptoms of Anxiety in 474(34.8%) , somatic complaints in 162(11.9%) and Dissociative Symptoms in120(8.8 %) of the patients. There was evidence of association between Migraine and symptoms of Anxiety in patients who presented with complaint of headache, more so in females than in males (p<.001).

Conclusion: Migraine is highly comorbid with anxiety symptoms than with symptoms of depression and this association is strong in females.

Key Words: Headache, Migraine, Vascular, Psychiatric disorders, Comorbid conditions, Outpatients.

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INTRODUCTION

No study looking at this relationship has been carried out in Pakistan. We aimed at finding out the prevalence and association of headache disorders (Migraine, tension type headache, secondary headache, and cephalgias) and Symptoms of psychiatric disorders (Depression, Anxiety, Somatic complaints and dissociative symptoms) in patients who presented to our outpatient psychiatric clinic. Headache disorders are highly comorbid with psychiatric disorders with undesirable outcomes for quality of life. These conclusions call for shared awareness, and a complete and harmonized attitude to their management. No study looking at this relationship has been carried out in Pakistan. We aimed at finding out the prevalence and association of headache disorders (Migraine, tension type headache, secondary headache, and cephalgias) and Symptoms of psychiatric disorders (Depression, Anxiety, Somatic complaints and dissociative symptoms) in patients who presented to our outpatient psychiatric clinic.[9]

Most evidence on this problem come from the West while these conditions are as common in the rest of the World as they are in the West. The extrapolation of data from The Global Burden of Disease Study (2013) to South Asia showed that he disability-adjusted life year (DALY) in South Asian countries from these disorders were in line with global rankings[2]. In Pakistan migraine is the most commonly diagnosed primary headache found in 81% of patients who present to a headache clinic[10]. The overall prevalence of anxiety and depressive disorders in the community population is estimated to be 34% (range 29-66% for women and 10-33% for men)[11]. Studies on the

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prevalence of comorbid psychiatric condition with headache in Pakistan shows that 48.5% patients with headache suffer from depressive disorders (dysthymia or depression or suicidality), while 17.9% suffer from anxiety related disorders (generalized anxiety disorder or agoraphobia or social phobia or panic disorder)[12]. Multiple psychopathological comorbidities in patients with medication overuse headache is supported by literature[13].The association between psychiatric illness and headache is recognized by the International Headache Society and "Headache attributed to psychiatric disorder" is a new group of secondary headache introduced in the 2004 revision of the International Classification of Headache Disorders 2nd Edition. (ICHD-II). It represents a new, but not conclusive, step toward a better systematization of the Headache and psychiatric comorbidities. These results need cooperative awareness and a harmonised approach to the treatment of these conditions in the health care services[14]. The probability of comorbidity among patients with headache disorders in Pakistan, and the inferences arising from that are thus matter of substantial public health and health policy making. Our aim was to examine the extent to which the headache disorders (migraine, tension-type headache (TTH), secondary headache and cephalgias) coexist with symptoms suggestive of another potential psychiatric disorder (anxiety disorders, mood disorders, somatic complaints, and dissociative symptoms) in patients from khyber Pukhtunkhwa, Pakistan and Afghanistan, and to further look further for any associations among these different types of headache disorders and Symptoms of psychiatric disorders.

MATERIAL AND METHODS

We reviewed and analysed the data in the database of our outdoor psychiatric clinic from June 2013 to June 2016. The demographic details, contact number, blood pressure, weight of the patients, history of present illness, past history, personal history, mental state examination, relevant physical examination and investigations in closed and open ended questions were recorded in our private software for recording patients' data at the time of assessment. The assessment of patients was made simultaneously by one consultant Psychiatrist and one medical officer with 4 years training in Psychiatry and the diagnosis made with mutual understanding. We started with personal history and open ended questions followed by close ended questions with an aim to establish the diagnoses. We have used ICD-10 Classification of Mental and Behavioural Disorders, Clinical descriptions and diagnostic guidelines for the purpose of diagnosing psychiatric cases and International Classification of Headache Disorders 2rd Edition beta (ICHD-III) for the diagnosis of headache disorders. Some diagnoses were made in the follow up visit for the awaiting category when more information about the condition had become available. The diagnoses were also changed on follow-up in cases where further information strongly suggested another diagnosis. The software is designed for keeping a record of all the information about the individual patients' visits. The data were imported from our server database to excel spreadsheet where the cases related to headache disorders were searched by applying filters. We used both the include and exclude options of filter, using the terms "Headache", "Dissociative", "migraine", "tension headache", "throbbing", "conversion", "non-epileptic fits", "apparent loss of consciousness", "Depressive episode", "low mood", "death wishes", "anxiety disorders" "fearfulness", "palpitations", "worrying thoughts", "stress", and "sleep", to the clinical features of all the cases in our database. We then individually selected cases with adequate information in the analysis and dropped those cases with deficient information.

Statistical analyses were performed using SPSS for Windows Version 20. Percentage values were calculated for Sociodemographic and diagnostic parameters. Numerical parameters like age was analyzed in means, and standard deviations. Headache disorders and co-morbid symptoms of other psychiatric condition made our nominal variables and the association between these variables was evaluated using the Pearson chi-square test with as an alpha value set to <. 05.

RESULTS

15.3% (n=1362) of patients out of 8,890 patients in our database had headache as one of their complaints. Mean age of these patients was 31±13.2 years. Nine hundred and fifty three (70.6%) were in the age range 15 to 35 years. 66.5% (n=906) were females while 33.5% (n=456) were males. 74.2% (n=1010) were married and 25% (n=340) were single. Migraine was diagnosed in 63.7% (n=867) of our selected, filtered study sample, tension-type headache (TTH) in 15% (n=204), secondary headache in 4% (n=55), cephalagias in 2.4% (n=33). 14.9% (n=203) of the patients had mixed type of headache not fitting into any single headache type. Predominantly depressive symptoms were reported by 60.4% (n=822) of patients, Anxiety symptoms by 34.8% (n=474) of the patients, somatic complaints by 11.9% (n=162) and Dissociative [Conversion] symptoms by 8.8 % (n=120) of the patients.

There was evidence of association between Migraine and Anxiety symptoms in patients who presented with complaint of headache (Table 1), X2=24.98(1), P<.001. This association was stronger in females than in males (Table 2) and in patients below 30 years of age compared to those older than 30 years (Table 3). Anxiety symptoms were also found to be associated with Tension-type headache, X2=27.67(1), P<.001. There was a negative association found between Migraine and Symptoms of Depressive episode (Table 4), X2=33.4(1), P<.001 and Somatic complaints (Table 5), X2=23.9(1), P<.001. The negative association of Migraine with somatic complaints was found significant in females but not in males, X2=25.54(1), P<.001 vs.

Table 1: Migraine and Symptoms of Anxiety in Different Age groups.

Age and Migraine		Symptoms of Anxiety		Total	Chi-square
30 years and Below Migraine		Absent	Present		X2=17.9(1), P<.001
	Absent	206	69	275	
	Present	320	214	534	
	Total	526	283	809	
31 years and Above Migraine		**Anxiety**			
		Absent	Present		
	Absent	123	50	173	X2=7.97(1), P=.005
	Present	162	121	283	
	Total	285	171	456	

Table 2: Migraine and Symptoms of Depression in patients presenting with Headache.

Headache Type		Symptoms of Depression		Total
Migraine		Absent	Present	
	Absent	146	349	495
	Present	394	473	867
Total		540	822	1362

X^2=33.4(1), P<.001.

Table 3: Migraine and Somatic Symptoms in patients presenting with Headache.

Headache Type		Somatic Symptoms		Total
Migraine		Absent	Present	
	Absent	408	87	495
	Present	792	75	867
Total		1200	162	1362

X^2=23.95(1), P<.001.

Table 4: Tension-type Headache and Symptoms of Anxiety in patients presenting with Headache.

Headache Type		Symptoms of Anxiety		Total
Tension-type Headache		Absent	Present	
	Absent	788	370	1158
	Present	100	104	204
Total		888	474	1362

X^2=27.67(1), P<.001.

X2=1.61(1), P=.204). No significant association could be found among the rest of headache types and psychiatric symptoms.

DISCUSSION

Migraine was the most common diagnosis (63%) in our sample of patients who presented to us with a complaint of headache. A previous local study in patients seeking treatment in a specialist headache clinic showed Migraine to be the commonest headache diagnosed in 81% of the patients[10]. This difference may be explained by the difference in populations under the two studies, where patients seeking treatment in a specialist headache clinic are expected to present with more disabling headache like Migraine.

A strong association was found between Migraine and symptoms of Anxiety but not between Migraine and symptoms of depression. Similar results have been reported in a large community based survey in Nepal, where a strong association between Migraine and Hospital Anxiety and Depression Scale-Anxiety Subscale (HADS-A), and neuroticism, but not between Hospital Anxiety and Depression Scale-Depression Subscale HADS-D[14] was found. There are no other significant reported studies from South Asian countries regarding headache and psychiatric comorbidities. A strong relationship between migraine and both anxiety and depression[15] was first confirmed in a Zürich cohort study. There finding were afterward stated in the United States (US)[16,17] and Canada[18]. However, as was shown in a latest review[19] and discovered in the French study7, depression in migraine infrequently occurs alone but is nearly constantly comorbid with Anxiety. High level of neuroticism has been shown in patients with migraine in other US studies[20]. In our study we found a negative association between migraine and symptoms depression and somatic complaints. This may be because of methodological problems in our study where patients in

our sample received a single preferable diagnosis with a low chance of recording depression and Migraine as comorbid, potentially leading to a negative association between the two conditions. There is comparatively tiny indication about comorbid psychiatric conditions and episodic tension type headache[21]. Probably because individuals with sporadic Tension Type Headache may not express the same level of personal distress as those with migraine[22]. TTH was however associated with anxiety symptoms in our study, the plausible explanation for which may be the fact patients with anxiety symptoms rather headache alone were expected to visit a Psychiatric clinic.

Headache disorders are undertreated everywhere[23], a failure that should not prevent attempts at remediation[3]. The situation is not different regarding psychiatric disorders too, where only a small number of the affected people get adequate treatment around the world[24]. From the perspective of Public Health, there is cause to worry about the great prevalence of Migraine and comorbid anxiety disorders in Pakistan. There is a clear adverse impact on quality of life in people with headache and comorbid psychiatric disorders. Global Burden of Disease (2013) postulates incapacity weights of these illnesses, which when multiplied by the pervasiveness produce estimates of disability burden. Pakistan, which is underdeveloped country with multiple natural and man-made adversities is not prepared to cope with them. This indication of aggravated burden usher in an urgent need for action backed by health policy.

CONCLUSION

In female population migraine is highly comorbid with anxiety symptoms than with depression.

RECOMMENDATIONS

From the clinical viewpoint, patients with headache disorders can be expected to have an excess of psychiatric manifestations, and vice versa. Physicians in Pakistan treating headache patients should be looking out among them for anxiety as potentially aggravating comorbid factors likely to hinder management. Moreover, psychiatrists treating depression and anxiety can expect to encounter migraine and other headache disorders at high levels. We recapitulate this as a need for reciprocal awareness and propose that a coordinated effort can offer a solution from both perspectives – public health and clinical. It necessitates training of health care providers encountering headache patients to think beyond the somatic dimension: collaborating with mental-health personnel in patient education on lifestyle, psychological treatment and behavioural strategies as appropriate options in addition to offering usual pharmacological interventions. This naturally happens to some extent where headache patients may be referred directly to psychiatrists.

In the rural areas and in the high hills, such referrals are generally not possible. In these areas most headache care is and should be provided in primary care, for reasons related both to logistics and cost[23]. Primary care is also where most depression and anxiety are encountered[25]. Bringing the management of headache disorders and common psychiatric disorders together under one roof of primary care, reinforced by educational initiatives and referral channels to specialist services, appears to be good health policy. We also recommend further prospective studies with a sound methodological approach to establish the cause and effect relationship between headache disorders and psychiatric comorbidities.

Strengths and Limitations

Our study is the first of its kinds in Pakistan where patients with headache seeking treatment at a psychiatric clinic were assessed for comorbid psychiatric symptoms. Our sample size was adequate and represent patients from various areas of Khyber Pukhtunkhwa and Afghanistan, and the result can be generalized to people living in these areas. The assessment of patients were made by two assessors simultaneously with adequate training in Psychiatry and diagnoses made with mutual understanding.

This study characterizes patients with headache disorders who sought treatment in our Psychiatric clinic and therefore it is inappropriate to generalize its results to headache disorders in the community. We have not used any psychometric scales to establish the severity and duration of these headache disorders and psychiatric symptoms, and their impact on quality of life. We therefore were not been able to find the association of different headache disorders with different grades of psychiatric comorbidities. Some headache types like chronic daily headache (CDH) (headache for >15 days/month) and medications overused headache (MOH) were not diagnosed in our study sample because of lack of information to support these diagnosis. CDH and MOH were shown to constitute 39% and 5% of headache disorders respectively in patients who presented to a specialised headache clinic in Karachi Pakistan. Furthermore as a general limitation of cross-sectional studies, while associations can be demonstrated, causality cannot be proven and further prospective studies are indicated to look into this relationship.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Ahmad B: Study Design data collection data analysis.

Muhammad A: Literature review references.

Sattar N: Data analysis

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.