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Prevalence of Psychiatric Comorbidities in Patients Presenting With Headache

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ABSTRACT

Objectives: To study the prevalence, nature and severity of Psychiatric comorbidities in patients presenting with headache.

Materials and Method: It is a descriptive, cross-sectional study, with a sample size of 100 patients presenting with primary headache, who consented to participate in the study.

Results: Tension type headache was most prevalent (49%). Psychiatric comorbidities were present in 55% patients, with Major Depressive Disorder being the most common (40%). Depression and anxiety range from mild to moderate in severity.

Conclusion: There is a high prevalence of psychiatric comorbidity in patients with headache. The primary headaches are more common in females than males. Tension type headache haS a higher prevalence than migraine, although the psychiatric comorbidity is higher in patients with migraine than in Tension Type Headache.

Keywords: *Psychiatric comorbidities, Tension type headache, Migraine, Depression.*

INTRODUCTION

Headache is one of the most common complaints in the general population. It can be bothersome and interfere with routine activities of life. [1,2,3] In most cases, although extensively investigated by classical clinical and radiographic examination, no organic cause is found. Such pain syndromes are associated with common mental disorders and some personality traits. [1,2,4] However, the dilemma of weather psychopathology is the cause or a consequence of chronic pain is still a matter of controversy. [4,5]

Several studies at the community level have discussed the frequent association between headache of any type and psychiatric comorbidity. [1,6,7]

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When compared to those with non-headache, migraineurs are between 4 and 5 times more likely to suffer from major depression, dysthymia, and bipolar disorders; 3 to 10 times more likely to suffer from panic disorder (PD); 4 to 5 times more likely to suffer from generalized anxiety disorder (GAD); and 5 times more likely to suffer from obsessive-compulsive disorder (OCD). [8,9] Migraineurs are also twice as likely to suffer from illicit drug abuse/dependence, alcohol abuse/dependence, and nicotine dependence. The lifetime prevalence rates of various psychiatric disorders among migraine patients are as follows: major depression (34%), dysthymia (9%), bipolar II (4%), PD (11%), GAD (10%), OCD (9%), and phobias (40%). [10] Increased rates of psychiatric disorders have been observed in individuals suffering from chronic tension type headache as well. [11,12,13]

There is also limited evidence to suggest that psychiatric comorbidity may play a significant role in the transformation of migraine to medication overuse headache and in the progression of headache frequency (e.g., from episodic to chronic and daily).

[14,15] Specifically, chronic migraine patients endorse higher levels of depression and anxiety than do episodic migraine patients,[16] and chronic non-migrainous headache (e.g. tension-type or cluster headache) patients endorse higher levels of depression and anxiety than do episodic non-migraineurs. [17, 18]

AIMS AND OBJECTIVES

- To study the psychiatric comorbidity in patients presenting with headache.
- To study the nature of psychiatric comorbidity associated with headache.
- To study the severity of psychiatric comorbidity associated with headache.

MATERIALS AND METHOD

STUDY DESIGN: It is a descriptive, cross-sectional study done at the Department of Psychiatry, Saraswathi Institute of Medical Sciences, NH-24, Pilakhuwa, Hapur, Uttar Pradesh

INCLUSION CRITERIA

Patients in the age group of 18-60 years of either sex.

Patients who visited the psychiatry OPD.

Those of who were diagnosed to have primary headache for example, migraine with or without aura, tension-type headache (episodic/chronic) and mixed headache were included in the study.

Patients who gave written consent to participate in the study.

EXCLUSION CRITERIA

Patients who were suffering from serious or debilitating medical illness

Patients with secondary headache due to any other underlying medical condition including substance use / abuse / dependence or withdrawal states.

Past history of Psychiatric disorders.

STUDY METHODOLOGY

Detailed Diagnostic Interview.

ICHD II - International Classification of Headache Disorders, 2nd edition.

ICD 10 - International Classification of Mental and Behavioural disorders

MINI - Mini International Neuropsychiatric Interview) [4]

HAM-A - Hamilton Anxiety Rating Scale

HAM-A - Hamilton Anxiety Rating Scale

After history taking with semi-structured format physical and mental status examination was. Subjects with headache were categorized using ICHD II. Those with psychiatric co morbidity were further classified using ICD-10. MINI was applied to all the patients with psychiatric comorbidity. HAM-A and HAM-D were applied to patients with comorbid anxiety and depression to assess the severity.

Towards the end of study data collected from individual cases was coded and tabulated in respective formats and subjected to analysis to answer the aims and objectives of this study. Outcome of the study was analysed using the latest version of computer software.

RESULTS

TABLE – 1: PSYCHIATRIC COMORBIDITY ACROSS BIOSOCIOCULTURAL VARIABLE

Variables	Groups	N=100	Comorbidity	%
Age at Presentation	≤ 30 years	39	20	51.28%
	> 30 years	61	35	57.38%
Sex	Males	35	16	45.71%
	Females	65	39	60%
Occupation	Skilled workers and above	32	17	53.12%
	Semi-skilled and below	68	38	55.88%

Cont... **TABLE – 1: PSYCHIATRIC COMORBIDITY ACROSS BIOSOCIOCULTURAL VARIABLE**

Socio-Economic Class (SEC)	SEC I, II & III	30	14	46.67%
	SEC IV & V	70	41	58.57%
Marital Status	Married	67	40	59.70%
	Unmarried	33	15	45.45%

Table 1 shows the prevalence of psychiatric comorbidity across various bio-sociocultural parameters. Total burden of comorbidities is 55%.

The distribution shows a slightly higher prevalence of psychiatric comorbidity in subjects over 30 years of age with 57.38% of the subjects falling into this category, as opposed to 51.28% subject being ≤ 30 years of age.

The sex distribution shows a larger divide with 39 out of 65 females (60%) having psychiatric comorbidity, in contrast to 16 out of 35 males with headache, amounting to 45.71%.

TABLE - 2: HEADACHE CLASSIFICATION

Type of Headache	Males	Females	Total (%)	Co-Morbidity
Migraine	11	18	29 (29%)	17 (58.62%)
Tension Type headache	17	32	49 (49%)	25 (51.02%)
Cluster Headache	3	5	8 (8%)	4 (50%)
Other Primary Headaches	2	6	8 (8%)	5 (62.5%)
Miscellaneous	2	4	6 (6%)	4 (66.67%)
Total	35	65	100	

Table 2 shows the different classes of headache in total 100 subjects. They are further divided into the prevalence of particular classes in males and females. The table also shows the subjects having comorbidities in these particular headache varieties.

A total of 29 out of 100 subjects (29%) were diagnosed with migraine. Out of these 18 were females and 11 were males. The total burden of comorbidity in subjects with migraine was found to be 58.62%, which is slightly higher than the comorbidity in Tension type headache (TTH). TTH was diagnosed in a total of 49 patients (49%), of which 32 were females and 17 were males. Psychiatric comorbidity was found in 51.02% of the subjects diagnosed with TTH.

TABLE – 3: BREAKUP OF PSYCHIATRIC COMORBID DISORDERS

Diagnosis	Total N	%	P value
Major Depressive Disorder	22	40 %	0.001
Anxiety Disorders	20	36.36 %	0.01
Dysthymia	4	7.27 %	0.14
Panic Disorder	5	9.09 %	0.14
Suicidality	1	1.81 %	0.23
Agoraphobia	3	5.45 %	0.34
Total Psychiatric Comorbidity	55	55 %	

Table 3 shows the percentage of different psychiatric conditions in patients presenting with headache. The total burden of Major depressive disorder is the maximum in the subjects with headache in our study. A total of 22 (40%) subjects out of 55 with comorbidities were diagnosed with major depressive disorder. 20 (36.36%) patients were diagnosed with anxiety spectrum disorders. The data pertaining to both these conditions was found to be statistically significant.

TABLE – 4: SEVERITY OF DEPRESSION IN HEADACHE PATIENTS (N = 22)

HAM - D Scores	Severity of Depression	Number of Patients	%
8 to 13	Mild	7	31.81 %
14 to 18	Moderate	9	40.90 %
19 to 22	Severe	4	18.18 %
≥23	Very Severe	2	9.09 %
Total		22	100 %

Table 4 tabulates the data obtained after the application of Hamilton Depression scale on the study subject diagnosed with major depressive disorder (MDD). A total of 22 subjects were diagnosed with MDD. 9/22 (40.90%) subjects were diagnosed with moderate depression, 31.81% with mild depression, 18.18% with severe and 9.09% were diagnosed with very severe depression.

TABLE – 5: SEVERITY OF ANXIETY IN HEADACHE PATIENTS (N = 20)

HAM – A Scores	Severity of Anxiety	No. of Patients	%
14 to 17	Mild	6	30 %
18 to 24	Moderate	10	50 %
25 to 30	Severe	4	20 %
Total	-	20	

Table 5 enumerates the data obtained after assessing the severity of anxiety in subjects presenting with headache. The total number of subjects diagnosed with anxiety disorder was 20. Out of these, 10 subjects (50%) were diagnosed with moderate anxiety, 6 (30%) with mild anxiety, and 4 (20%) with severe anxiety.

DISCUSSION

55 out of 100 subjects (55%) with complaints of headache had psychiatric morbidity according to the ICD - 10 classification in our study. This finding of the study is similar to other epidemiological studies, where high psychiatric disorders occur in patients with headache. [19]. Also, out of the total 100 study subjects 61% were females, and out of those, 39 (60%) had psychiatric comorbidities. Similar findings have been observed in other studies, including Indian studies by Singh et al. [20]

Longitudinal data indicates that relative to men, females are four-times more likely to develop migraine and two times risk of developing major depression. [21] Similar findings have been replicated in our study.

Also, our findings are similar to those reported in the West where the prevalence of Chronic daily headache has been reported to vary from 3040% of all patients visiting headache speciality clinics. [24] In contrast to this, Chakravarty in the only other study of patients with CDH from India found it to be responsible for 49.6% of all primary headaches. [22] The mean age of patients in the present study was 30.2 years and the ratio of women: Men were 2.29:1. This is comparable to other studies where the % of female patients has been reported to vary from 6580%. [24] The mean age of patients in the study done by Chakravarty, [22] was 39 years and 80% of patients were women. Our findings are also comparable to this data.

The figures for depression in migraine (59.9%), tension type headache (68.3%), combined migraine and tension type headache (69.6%) and anxiety (migraine 18.4%, tension type headache 19.3%, combined migraine and tension type headache 18.4%) did not show a significant difference. [22] The frequency of depression found in the present study (40%) is similar to that observed by Verri, et al., (35 %), while Mathew et al., [23] and Juang et al., observed it in 61% and 57% respectively. In 116 consecutive adults, out patients with a diagnosis of CDH, De Fillipis et al., [25] found that 28% had moderate to severe depression and 35% had severe hopelessness.

The commonest psychiatric comorbidity in patients with chronic migraine seen in the present study was major depressive episode (40%). This is similar to the observations of Juang et al., (57%), Beghi, et al., (59.9%). On the other hand, Chakravarty et al., [22] and CardonaCastrillon, et al., [26] had lower figures 24.85% and 21.3% respectively.

The prevalence of suicidality in the study was 1.81% in our study. The only case of suicidality was associated with depression in the study group. Pompili M et al. however found a strong association between a distinct pattern of affective temperaments and increased risk for suicidal behaviour in patients with mood disorders. [27]

Wacogne et al [28] measured the intensity of stress, anxiety and depression in a sample of 141 migraineurs compared with a control group of 109 nonmigraine workers matched for age and sex. Their results indicated that stress and anxiety were higher in the migraine group than in the control group.

Prevalence of panic disorder in our study was 6.9% in chronic migraine which is similar to Cardona Castrillon, et al., [25] study of 5.6%. In study of E Beghi. 12.7% of migraine, 5.5% TTH and 14.2% of combined migraine and tension type headache patients had panic disorders. Obsessive compulsive disorders were found in 5.0% in chronic migraine, and 9.0% in CTTH patients in our study and E Beghi. observed 2.3% in migraine, 1.1% in TTH, and 9.4% in combined migraine and tension type headache.

In our study, the prevalence of panic disorder in patients with tension type headache was found to be around 20.41 which is not in agreement with most other studies mentioned above. Various social, cultural and geographical factors can be responsible for the observed difference. However, our study replicated the prevalence of panic disorder at 6.9% in subjects diagnosed with chronic migraine.

According to a study by Zwart et al, [17] depression and anxiety disorders as measured by HADS, were significantly associated with migraine and non migrainous headache when compared with headache free individuals.

CONCLUSION

There is a high prevalence of psychiatric comorbidity in patients with headache. The primary headaches are more common in females than males. Tension type headache have a higher prevalence than migraine, although the psychiatric comorbidity is higher in patients with migraine than in Tension Type Headache.

Major Depressive disorder is the most common psychiatric comorbidity in patients presenting with headache, followed by anxiety disorder.

The severity of psychiatric comorbidity in headache patients with Major depressive disorder and Anxiety disorder lies mostly in the mild to moderate spectrum.

Conflict of Interest: None

Source of Funding: Self

Ethical Clearance: Obtained from the Ethical Committee

REFERENCES

(1) Bensenor IM, Tofoli LF, Andrade L. Headache complaints associated with psychiatric comorbidity in a population-based sample. Brazilian Journal of Medical Biological Research. 2003;36(10):1425-32.

(2) Kroenke K & Price RK (1993). Symptoms in the community: prevalence, classification, and psychiatric comorbidity. Archives of Internal Medicine, 153: 2474-2480.

(3) Rasmussen BK (1995). Epidemiology of headache. Cephalalgia, 15: 45-68.

(4) Mongine F, Ferla E & Maccagnani C (1992). MMPI profiles in patients with headache or craniofacial pain: a comparative study. Cephalalgia, 12: 91-98.

(5) Mongine F, Defilippi N & Negro C (1997). Chronic daily headache. A clinical and psychological profile before and after treatment. Headache, 37: 83-87.

(6) Merikangas KR, Angst J & Isler H (1990). Migraine and psychopathology: results of the Zurich Cohort Study of Young Adults. Archives of General Psychiatry, 47: 849-853.

(7) Breslau N, Davis GC & Andreski P (1991). Migraine, psychiatric disorders and suicide attempts: an epidemiological study of young adults. Psychiatry Research, 37: 11-23.

(8) Breslau N. Psychiatric comorbidity in migraine. Cephalalgia. 1998;18 (supplement 22): S56-S61.

(9) Lake AE III, Rains JC, Penzien DB, Lipchik GL. Headache and psychiatric comorbidity: Historical context, clinical implications, and research relevance. Headache. 2005; 45:493-506.

(10) Lipchik GL, Penzien DB. Psychiatric comorbidities in patients with headaches. Seminars in Pain Medicine. 2004; 2:93-105.

(11) Guidetti V, Galli F, Fabrizi P, et al. Headache and psychiatric comorbidity: Clinical aspects and outcome in an 8-year follow-up study. Cephalalgia. 1998; 18:455-462.

(12) Holroyd K, Stensland M, Lipchik GL, Hill KR, O'Donnell FS, Cordingley G. Psychosocial correlates and impact of chronic tension-type headaches. Headache. 2000; 40:3-16.

(13) Radat F, Swendsen J. Psychiatric comorbidity in migraine: A review. Cephalalgia. 2005; 25:165-178.

(14) Lipton RB, Pan J. Is migraine a progressive brain disease? JAMA. 2004; 291:493-494.

(15) Shechter AI, Lipton RB, Stewart W. Risk factors for chronic daily headache. Current Pain Headache Reports. 2002; 6:486-491.

(16) Karakurum B, Soylu O, Karatas M, et al. Personality, depression, and anxiety as risk factors for chronic migraine. International Journal of Neuroscience. 2004; 114:1391-1399.

(17) Zwart JA, Hagen K, et al. Depression and anxiety disorders associated with headache frequency. The Nord-Trøndelag Health Study. European Journal of Neurology. 2003; 10:147-152.

(18) Morris Maizels, MD; Todd A. Smitherman, PhD; Donald B. Penzien, PhD. A Review of Screening Tools for Psychiatric Comorbidity in Headache Patients. Headache 2006;46 [Supplement 3]: S98-S109. Available at: doi: 10.1111/j.1526-4610.2006. 00561.x

(19) Lloyd GG (1986) Psychiatric syndromes with a somatic presentation. Journal of Psychosomatic Research 30: 113-120.

(20) Singh AK et al. Association of Psychiatric comorbidity and efficacy of treatment in chronic daily headache in Indian Population. Journal of Neurosciences in Rural Practice. 2013 Apr-Jun; 4(2): 132-139

(21) Waters WE, O'Connor PP (1957) Prevalence of migraine. Journal of Neurology Neurosurgery and Psychiatry 38: 613-616.

(22) Chakravarty A. Chronic daily headaches: Clinical profile in Indian patients. Cephalalgia. 2003; 23:348– 53. [PubMed: 12780764]

(23) Mathew NT, Reuveni U, Perez F. Transformed or evolutive migraine. Headache. 1987; 27:102–6. [PubMed: 3570762]

(24) Bigal ME, Sheftell FD, Rapoport AM, Tepper SJ, Lipton RB. Chronic daily headache: Identification of factors associated with induction and transformation. Headache. 2002; 42:575–81. [PubMed: 12482208]

(25) De Flippis S, Erbuto D, Gentiti F, Innamorati M, Lester D, Tatarelli R, et al. Mental turmoil, suicide risk, illness perception and temperament, and their impact on quality of life in chronic daily headache. Journal of Headache and Pain. 2008; 9:349–57. [PMCID: PMC3452079] [PubMed: 18953488]

(26) CardonaCastrillon GP, Isaza R, ZapataSoto AP, Franco JG, GonzalezBerrio C, TamayoDiaz CP. The comorbidity of major depressive disorder, dysthymic disorder and anxiety disorders with migraine. Revista de Neurologia 2007; 45:272–5. [PubMed: 17876737]

(27) Pompili M, Innamorati M, Rihmer Z, Gonda, Serafini G, et al. (2012) Cyclothymic-depressive-anxious temperament pattern is related to suicide risk in 346 patients with major mood disorders. Journal of Affective Disorders 136: 405-411.

(28) Wacogne C, Lacoste JP, Guillibert E, Hugues FC, Le Jeunne C (2003) Stress, anxiety, depression and migraine. Cephalalgia 23: 451-45