Psychiatric Co-Morbidity in Patients Presenting with Primary Headache

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Abstract

Background: Headache is a common neurological disorder and most disabling conditions in the worldwide. Psychiatric disorders can occur with at least two to three-fold greater frequencies among the patients presenting with headache than among general population. The presence of psychiatric co-morbidity further complicates headache management and portends a poorer prognosis. Therefore, the present study of psychiatric co-morbidity in patients presenting with primary headache and to know the nature and extent of psychiatric co-morbidity associated with headache among the patients was undertaken. **Methods:** Present sample consists of 62 patients who presented with the complaints of headache to the department of Psychiatry and Neuropsychiatry from August 2016 to June 2018 was included in the study. MINI 7.0.0 was applied to elicit the presence of any Psychiatric disorder. **Results:** In this study 65% of the patients presenting with headache had co-morbid psychiatric disorders. Out of 65% of the psychiatric illnesses; 43.55% had MDD, 14.52% had GAD, 3.23% had Panic disorder and 3.23%had Social phobia among the patients presenting with headache. **Conclusions:** Patients presenting with headache have high levels of co-morbid psychiatric disorders. In view of the present findings, the management of patients presenting with headache should include the detail assessment of coexisting psychopathology and treatment of both coexisting conditions.

Keywords: Chronic Daily Headache, Cluster-Type Headache, Migraine, Psychiatric Co-Morbidity, Tension-Type Headache

1. Introduction

Headache is a common neurological disorder that ranks among the top 10 most disabling conditions for both men and women worldwide and at least 40 percent of individuals in the world are suffering from severe disabling headache[1,2]. Every year, about 80 percent of the population is estimated to suffer from headache at least once, and 10 to 20 percent of the population goes to physicians with headache as their primary complaint. Headaches are also a major cause of absenteeism from work and of avoidance in social and personal activities. Severe headaches also have major economic impact due to medical expenses[2].

Headaches are commonly associated with psychiatric disorders where psychiatrists are often consulted for the evaluation and treatment of people suffering from it. Most headaches are not associated with significant organic disease; many people are susceptible to headaches at times of emotional stress. The relationship between headache and psychiatric disorders is complex.

Numerous studies have been done to look whether psychological problem is a cause or the consequences of headache which are still remains controversial[3]. Psychiatric disorders occur with at least two to three-fold greater frequencies among the patients presenting with headache than among general population, and the prevalence increases in clinical population especially

with chronic daily headache. The presence of psychiatric co-morbidity further complicates headache management and portends a poorer prognosis for headache treatment. The challenge for future studies is to employ research methods and designs that accurately identify and classifies the subsets of headache with psychiatric disorders, evaluate their impact on headache symptoms and treatment, and identify optimal behavioral and pharmacological treatment strategies[4,5].

2. Methods

This hospital based - cross sectional study included patients presenting with headache who visited to Psychiatry outpatient department of a tertiary care hospital and research center Dr. Vasant Rao Pawar Medical College, Nashik, India. Sixty-two patients belongs to the age group of 18-60 years of either sex was included.

Those who are diagnosed by physician/psychiatrist to have primary headache for ex. migraine with or without aura, tension-type headache (episodic/chronic) and mixed headache and who are ready to give the consent were included in the study. Patients who are suffering from serious or debilitating medical illness and patients with secondary headache due to any other underlying medical condition such as Head and neck trauma, Cranial or cervical vascular disorder, Intracranial disorders were excluded. The study was approved by the institutional ethical clearance and informed consent was obtained from all the patients who were included in the study.

Semi structured proforma for recording socio-demographic variables, medical and psychiatric history was used. Patients with headache were categorized using ICHD III (International classification of headache). Semi structured proforma for recording socio-demographic variables, medical and psychiatric history, ICD 10 (International Classification of Mental and Behavioral disorders) and ICHD -III (International Classification of Headache Disorders, 3rd edition) were used as tools.

Mini International Neuropsychiatric Interview (MINI) was designed as a brief structured interview for the major Axis-I and axis-II psychiatric disorder in DSM-V and ICD-10. Validation and reliability studies have been done comparing the M.I.N.I. to the SCID-P for DSM-III-R and the CIDI (a structured interview developed by the World Health Organization for lay interviewers for ICD-10).

2.1 Statistical Analysis

The data obtained was represented as percentages and numerical data. The data collected is summarized in the form of tables and respective histograms as depicted below. The outcome of the study was analyzed using SPSS software-19 version.

3. Results

The data collected is summarized in the form of tables and respective histograms as depicted below. The results of these studies show that the M.I.N.I. has acceptably high validation and reliability scores, but can be administered in a much shorter period of time (18.7±11.6 minutes) than the above referenced instruments. It can be used by clinicians, after a brief training session.

Figure 1 shows socio demographic profile of the study population. The study group consisted of 62 primary headache patients, the age range being between 18-60 years. Majority of patients belonged to age group between
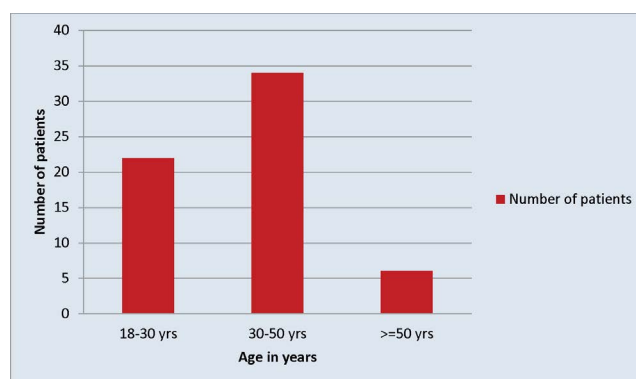
Figure 1. Distribution among the study population based on age group.
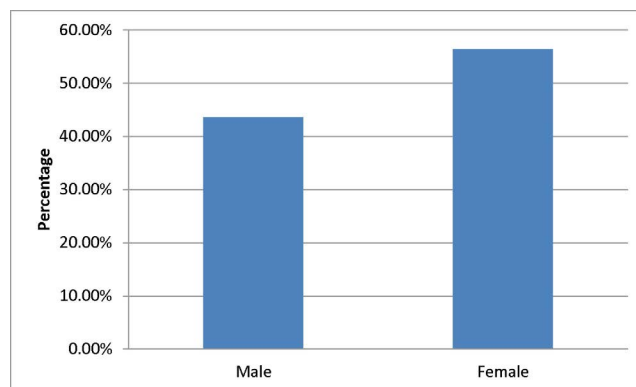

Figure 2. Gender-wise distribution of patients among the study population with headache.

Table 1. Distribution of patients among the study population with type of headache

Type of Headache	Frequency	Percentage
Tension Type Headache	39	62.90%
Migraine	21	33.87%
Cluster Headache	2	3.23%
Total	**62**	**100.00%**

Tension–type of headache accounts to 62.90% of the sample studied and is the most common type of headache (Table 1).
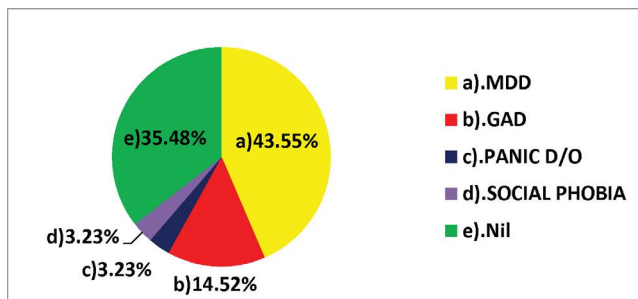
Figure 3. Distribution of Psychiatric co-morbidity among the patients with headache.

Table 2.

Psychiatric Morbidity	Frequency	Percentage
MDD*	27	43.55%
GAD**	9	14.52%
Panic D/O	2	3.23%
Social Phobia	2	3.23%
Nil	22	35.48%
Total	**62**	**100.00%**

*MDD-Major Depressive disorder, **GAD- Generalized Anxiety disorder.

30 to 50 years (54.84%) followed by 18 to 30 years (35.48%) and more than 50 years (9.68%).

Figure 2 shows female predominance (56.45%) amongst study population as compared to male (43.55%).

Psychiatric morbidity like MDD, GAD, Social phobia and panic disorder was present in 43.55%, 14.52%, 3.22% and 3.23% of study population respectively. 35.48% of population had no psychiatric illness. Most common psychiatric morbidity is MDD (43.55%) followed by GAD, panic disorder and social phobia (Figure 4 & Table 2).

4. Discussion

In the present study, Majority of patients belonged to age group between 30 to 50 years (54.84%) followed by 18 to 30 years (35.48%) and more than 50 years (9.68%); where females were found to be predominates (56.45%) over men (43.55%). The headache that affects disproportionately more in women than in men in our study can be due to gender based violence, socioeconomic disadvantage, income inequality, low or subordinate social status, unremitting responsibility for the care of others.

Previous studies by Lipton et al.[6] had found the high prevalence of headache among the young adults which is almost similar to our study findings. Indian study by Jain AP et al., 50 has also similar results (70.4% were in the age group of 21 to 40 with a mean age at presentation was 31.2 years) to present study findings.

Another study by Mansur et al.[7] which is not consistent to present study findings as their study have found that 37% of the patients presenting with headache were below the age of 18 years, 40.27% were within the range of 18-49 years and only 3.32% were belong to the age group of more than 50 years. This difference in their study was due to the inclusion of all the age groups ranged from 12 years to more than 65 years, and differences in the methodology.

In present study population tension-type of headache was found to be the commonest type of headache with a prevalence of 62.90% followed by migraine headache (33.87%) and least were cluster headache (3.23%). Previous studies which had found the results similar to our study are: Stovner et al.[8] has found that tension-type headache were more (46%) common than migraine (11%) and least was cluster headache (0.2%-0.3%); Kandil et al.[9] TTH (64%) was found to be high prevalence followed by migraine (31%) and least were cluster type of headache (4%). This high prevalence of tension-type headache is shown to have a major impact on patients' job performance and quality of life, leading to an economic burden on family members.

The overall prevalence of psychiatric co-morbidity among the patients presenting with headache were 65%, which was assessed by using MINI in our study. Many other studies are in line with our study findings. Bera et al.[10] reported that, the psychiatric co-morbidity in subjects of migraine and TTH was 62.5% and 60% respectively with no differences between both the groups. However, co-morbidities were much higher as compared

to healthy controls (22.5%) in their study; Singh *et al.*[11] found that psychiatric co-morbidity was seen in 53.3% of the patients presenting with chronic daily headache.

In the present study, Psychiatric morbidity like MDD, GAD, Social phobia and panic disorder was present in 43.55%, 14.52%, 3.22% and 3.23% of study population respectively. 35.48% of population had no psychiatric illness. Most common psychiatric morbidity is MDD (43.55%) followed by GAD, panic disorder and social phobia. Many other studies are in line with our study findings. Bera *et al.*[12] reported that, the psychiatric co-morbidity in subjects of migraine and TTH was 62.5% and 60% respectively with no differences between both the groups. However, co-morbidities were much higher as compared to healthy controls (22.5%) in their study; Singh *et al.*[13] found that psychiatric comorbidity was seen in 53.3% of the patients presenting with chronic daily headache. Verri *et al.*[14] also reported that, 25.8% had depression, 17% had dysthymia among the patients presenting with headache; Fillipis *et al.*[15] has found that 28% had moderate to severe depression in patients with headache. Merikangas *et al.*[16] did not find any significant difference in the frequency of major depression among the patients with TTH as compared to headaches free control.

5. Conclusion

Depressive disorders were the most predominant co-morbid psychiatric disorders among the patients presenting with headache followed by anxiety spectrum disorders. Young adults and female gender were most likely to suffer from co-morbid psychiatric disorders among the patients presenting with headache. Tension-type of headache was the found most common type of headache followed by migraine and least were cluster type headache. There is a high incidence of co-morbid psychiatric conditions associated with Headache.

Ethical approval: The study was approved by the Institutional Ethics Committee.

6. References

1. Hussain AAM, Mohit MA, Ahad MA, Alim MA. A study on psychiatric co-morbidity among the patients with migraine. TAJ, 2008; 21(2):108-111. https://doi.org/10.3329/taj.v21i2.3787.

2. Amanda K, Kathleen M. Physical and mental comorbidity of headache in a nationally representative sample of U.S. adults. Psychosom Med., 2008; 70(7):773-780. https://doi.org/10.1097/PSY.0b013e31817f9e80. PMid:18725426 PMCid: PMC2933379.

3. Zuraida NZ, Parameswaran R. Prevalence of depression among patients with headache in Kuala Lumpur, Malaysia. Malaysian J Psych., 2007; 16(2).

4. Lake AE, Rains JC, Penzien DB, Lipchik GL. Headache and psychiatric comorbidity: Historical context, clinical implications and research relevance. Headache, 2005; 45:493-506. https://doi.org/10.1111/j.1526-4610.2005.05101.x. PMid:15953266.

5. Antonaci F, Nappi G, Galli F, Manzoni GC, Calabresi P, Costa A. Migraine and psychiatric comorbidity: A review of clinical Findings. J Headache Pain, 2011; 12:115-125. https://doi.org/10.1007/s10194-010-0282-4. PMid: 21210177 PMCid: PMC3072482.

6. Lipton RB, Mansur H. Headache, study of 3350 cases. Bangladesh J Neuroscience, 2001; 17(1):1-5.

7. Mansur, Jain AP, Chauhan B, Bhat AD. Sociodemographic and clinical profile of headache -A rural hospital-based study. IACM, 2007; 8(1):26-28.

8. Stovner LJ, Andree C. Prevalence of headache in Europe: A review for the Eurolight project. J Headache Pain, 2010; 11(4):289-299. https://doi.org/10.1007/s10194-010-0217-0. PMid:20473702 PMCid: PMC2917556.

9. Kandil MR, Hamed SA, Fadel KA, Youssef AH, Mohammed AB, Hamed et al. Epidemiology of Tension-Type Headache (TTH) in Assuit Governorate, Egypt. Journal of Neurology and Neuroscience, 2014; 5(1):2.

10. Bera SC, Sudhir K, Sood KM, Goyal V. A comparative study of psychiatric comorbidity, quality of life and disability in patients with migraine and tension type headache. Neurology India, 2014; (62)5. https://doi.org/10.4103/0028-3886.144445. PMid:25387621.

11. Singh AK, Shukla R, Trivedi JK, Singh D. Association of psychiatric co-morbidity and efficacy of treatment in chronic daily headache in Indian population. J Neurosci Rural Pract, 2013; 4:132-139. https://doi.org/10.4103/0976-3147.112736. PMid:23914085 PMCid: PMC3724287.

12. Bera SC, Sudhir K, Sood KM, Goyal V. A comparative study of psychiatric comorbidity, quality of life and disability in patients with migraine and tension type headache. Neurology India, 2014; 5(62). https://doi.org/10.4103/0028-3886.144445. PMid:25387621.

13. Singh AK, Shukla R, Trivedi JK, Singh D. Association of psychiatric co-morbidity and efficacy of treatment in chronic daily headache in Indian population. J Neurosci Rural Pract, 2013; 4:132-139. https://doi.org/10.4103/0976-3147.112736. PMid:23914085 PMCid:PMC3724287.

14. Verri AP, Cecchini PA, Galli C, Granella F, Sandrini G, Nappi G. Psychiatric comorbidity in chronic daily headache. Cephalalgia, 1998; 18(21):45-49. https://doi.org/10.1177/0333102498018S2112. PMid:9533671.

15. Filippis D, Teixeira AL, Costa EAC, Silva Jr AAD, Moreira dos Santos A, Go'mez RS, Kummer A, *et al.* Psychiatric comorbidities of chronic migraine in community and tertiary care clinic samples. J Headache Pain, 2012; 13:551-555. https://doi.org/10.1007/s10194-012-0480-3. PMid:22940870 PMCid: PMC3444538.

16. Merikangas M, Mateen FJ, Dua1 T, Steiner T, Saxena S. Headache disorders in developing countries: Research over the past decade. Cephalalgia. Inter J Headache, 2008; 28(11):1107-1114. https://doi.org/10.1111/j.1468-2982.2008.01681.x. PMid:18727634.