

Prevalence of Psychiatric Comorbidity in Subjects with Migraine: A Hospital Based Study in Western UP.

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Abstract

Background: The broad range of psychiatric comorbidities associated with migraine which has important implications for healthcare professionals, poor outcome being one of the reasons.

Objective: To assess prevalence of psychiatric comorbidity in patients of migraine.

Materials and Method: 35 consecutive patients of migraine who attended psychiatry outpatient were assessed over the period of six months for psychiatric comorbidity on the basis of MINI – International Neuropsychiatric Interview, characteristics of pain and socio-demographic details.

Results: The majority of visitors were middle-aged, literate, married, Hindu, unemployed females from rural background. Psychiatric comorbidity was present in 18 (N=35, 51.4%) cases. The most common psychiatric comorbidity was depressive disorder (N=11, 31.4%) and second most common was tobacco abuse (N=5, 14.3%).

Conclusions: Majority of patients with headache suffered from depressive disorders followed by tobacco abuse.

Keywords: Psychiatric Co morbidity, Migraine.

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I. Introduction

Clinically, migraine is described as an episodic headache, lasting 4-72 hours with perceptual and sensory sensitivity and throbbing nature.¹ “Comorbidity” refers to the occurrence of two conditions in the same individual at a frequency greater than would be expected by chance.² Associations of psychiatric comorbidity in various physical disorders are well studied³⁻⁶ and also in migraine.⁷⁻¹² Study of psychiatric comorbidity is important because outcome with psychiatric comorbidity in migraine is negatively influenced.¹³ Psychiatric comorbidity reported in various studies ranges from most common depressive and anxiety disorder to other psychiatric disorders in adults.^{7,9-14} To extend the findings of previous work the purpose of this study is to find prevalence of psychiatric comorbidity in patients with migraine in western U.P. Using data from patients attending psychiatry OPD with primary concern of migraine, we addressed the following question: what is the prevalence of psychiatric comorbidity in migraine in western U.P.?

II. Materials And Methods

The study was carried out at Outpatient Department of Psychiatry, Netaji Subhash Chandra Bose Subharti Medical College, Meerut, India. For screening, study population consisted of new and old cases those attended psychiatry OPD on specific days. Target population for the study consisted of those presented with primary complaint of headache and the sample made up of Primary Migraine Headache as per International Headache Society (IHS) criteria 2004 (ICHD-II)¹⁵ after assessed by the author SS. Patients with the diagnosis of secondary headache, medication overuse headache and substance dependence were excluded from the study. Wherever required blood investigations, thyroid profile, neuro-imaging, EEG, etc were done and ophthalmic and otorhinolaryngology opinion were sought to rule out secondary headache. A total of 35 consecutive cases diagnosed with migraine were assessed in cross-section time after written informed consent was taken. After sample selection, a semi-structured proforma was filled that contained the socio-demographic and clinical details especially drafted for the purpose of the study including details of headache.

To assess comorbid psychiatric disorders on the basis of ICD-10, MINI – International Neuropsychiatric Interview (M.I.N.I.)¹⁶ (English Version 5.0.0) was applied by the author VK. M.I.N.I. is a brief structured diagnostic interview for Axis I psychiatric disorders as per DSM IV and ICD-10 and it has high validation and reliability scores.

III. Results

A total of 35 patients (22 females, 13 males) were assessed in the study. An average headache patient visited was a middle-aged, married, literate, Hindu, female from rural background. Majority of headache patients were homemakers, belonged to joint family and were dependent. (Table-1) In our study, almost half of the sample was presented with one or more psychiatric comorbidity. The most common psychiatric comorbidity in the sample was depressive disorder (31.4%, n=11) followed by tobacco abuse (14.3%, n=5), panic disorder (11.4%, n=4), alcohol abuse (8.6%, n=3) and obsessive compulsive disorder (5.7%, n=2). (Table-2) In 7 (38.9%) out of 18 patients with migraine who presented with psychiatric comorbidity had 2 simultaneous comorbid psychiatric disorders. (Table-3) If we look at headache characteristics, the mean age of onset of headache was 28 years. Majority of subjects experienced acute onset (74.3%, n=26) of headache. Approximately six years was mean duration of illness. Precipitating factor was found in 57.1% (n=20) of cases e.g. travelling (n=10), stress (n=6), work related stress (n=4), sleep deprivation (n=1), tea (n=1) and egg (n=1) consumption, smoke (n=1) and fragrance (n=1). Unilateral headache was found in almost half (51.4%, n=18) of the subjects. Relieving factor was found in 57.1% (n=20) of subjects.

Most common relieving factor in the study was drug (n=10) and others were sleep (n=4), darkness (n=4), silence (n=3), massage (n=2), tea (n=1) and ice-pack (n=1). Aggravating factors were found in 45.7% (n=16) of subjects. Most common aggravating factor was loud noise (n=11) followed by bright light (n=5) and activity (n=5). Associated symptoms were found in all the subjects. Most common associated symptom was nausea (n=31) followed by phonophobia (n=29), photophobia (n=23), vomiting (n=20). (Table-4)

IV. Discussion

A total of 35 patients diagnosed with migraine were assessed in this study. The mean age of sample was 33.42 years (SD 11.04, range 18-55 years). Similarly, Gupta U, et al. (2014)⁷ and Bera, et al. (2014)¹³ reported the mean age of patients with migraine as 30.27 ± 7.75 years (N=48) and 33.45 ± 6.59 (N=40), respectively. In another clinic based study, the mean age of the sample was reported as 47 years which may be due to greater sample size (N=250).¹⁷ (Table-1) The mean age of onset of headache for total sample in this study was 28.2 years (SD 8.19, 95% CI 27.54 – 28.86). (Table-4) In our study, we found that 18 (51.4%) subjects with migraine had comorbid psychiatric illness. Depressive disorder was found in 11 (31.4%) subjects of total sample. A population based study (N=4181) reports 14.8% (n=79) had depression in past year.⁹ Another population based study (N=36,984) reports 3984 (10.8%) subjects were having migraine and further reported 8.6% (CI 7.3-9.8) subjects had 12 months prevalence of MDD and 18.8% (CI 17.0-20.5) had lifetime prevalence of MDD.¹⁰ Further, clinic based studies reports depression in 37.5% (n=15)¹³ and 14% (n=14)¹⁸ in their subjects having migraine.

Tobacco abuse in 5 (14.3%) and Alcohol Dependence was diagnosed in 3 (8.6%) subjects. Studies pertaining to prevalence of substance abuse in migraine have showed mixed results. Studies suggests that higher incidence of tobacco (smoked and non-smoked both)^{19,20} found in patients with migraine and some studies says that it is not statistically significant.^{8,10} Alcohol abuse pattern in patients with migraine had consistently shown to have non-significant associations in many studies when compared with non-sufferers²¹, tension-type headache²² and cross-sectional relationship in prospective study⁸. Psycho-pathogenesis of substance abuse in itself a complicated phenomenon and it has also been reported as triggering factor for migraine.^{21,23} It has also been reported that out of 9 subjects only 1 had give up smoking because it used to trigger migraine and other 3 gave up because of other reasons.²³ Hence, only trigger-effect relationship does not seem to influence substance abuse prevalence in patients with migraine. Further, in our study 62.9% (n=22) were females out of which 72.7% (n=16) were unemployed. In the studied geographic area tobacco and alcohol abuse in females particularly in housewives is little reported which may be one of the factor for low prevalence in our study.

Anxiety related disorder (all were diagnosed as panic disorder) was found in 4 (11.4%) subjects in our study. Clinic based studies reports prevalence of panic disorder ranging from 4.8% to 19.7% of cases.^{7,13,17,24} Cross-sectional association between migraine and panic disorder found to be highly significant ($p < 0.001$) in a population based study when adjusted for age and sex in a community sample.⁸ Similarly another population based study reveals 12 month prevalence as 5.5% (CI 4.5-6.4) and lifetime prevalence as 9.6% (CI 8.4-10.8) for panic disorder/agoraphobia with panic symptoms without panic disorder.¹⁰ OCD was found in only 2 (5.7%) of the subjects in our study. Interestingly small sample sized structured interview,^{7,14} unstructured interview based¹⁸ and retrospective¹⁷ studies reports no case of OCD in their sample. Even, population based studies does not report OCD in either in past 12 months^{9,10} or in lifetime prevalence¹⁰. A community sample based study also reveals non-significant cross-sectional associations between migraine and lifetime OCD.⁸

Also the studies which reports OCD have very small number of cases i.e. 2 (n=40)¹³ and 1 (n=152)²⁴ which is closely replicated in our study.

V. Conclusions

Psychiatric comorbidities are common findings in migraine patients which have been replicated repeatedly in studies. In our small, non-randomized and clinic based sample sized study the most common comorbidity found is depressive disorder. Authors suggest that further study may be planned to explore approximate possibilities with larger population sample in the concerned geographical area.

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Conflict of Interest: None.

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Table-1 Socio-demographic Data and Diagnosis of the Sample.

Characteristics		N=35 (n %)
Mean Age (Years)		33.42±11.04
Age in groups	15-25	9 (25.7)
	26-50	25 (71.4)
	≥51	1 (2.9)
Sex	Male	13 (37.1)
	Female	22 (62.9)
Marital Status	Single	13 (37.1)
	Married	22 (62.9)
Education	Illiterate	8 (22.9)
	Secondary education	18 (51.4)
	Graduate	5 (14.3)
	Postgraduate	4 (11.4)
Religion	Hindu	21 (60.0)
	Muslim	14 (40.0)

Domicile	Rural	21 (60.0)
	Urban	14 (40.0)
Family	Nuclear	15 (42.9)
	Joint	20 (57.1)
Employment	Student	7 (20.0)
	Housewife	16 (45.7)
	Daily wage labourer	5 (14.3)
	Salaried	7 (20.0)
Income	Dependent	24 (68.6)
	Earners	11 (31.4)
Diagnosis	Migraine with Aura	14 (40.0)
	Migraine without Aura	21 (60.0)

Table-2 Presence of Comorbidity.

Comorbidity*	N=35 (n%)
Total	18 (51.4)
Depressive Disorder	11(31.4)
Tobacco Abuse	5 (14.3)
Panic Disorder	4 (11.4)
Alcohol Abuse	3 (8.6)
Obsessive Compulsive Disorder	2 (5.7)

*Not Mutually Exclusive

Table-3 Presence of Multiple Comorbidity.

Comorbidity	N=18 (n%)
One	11 (61.1)
Two	7 (38.9)

Table-4 Migraine Characteristics and Clinical Features.

Characteristics	N=35(%) n	
Mean Age of Onset (in years) of Headache	28.2±8.19	
Type of Onset	Acute	26 (74.3)
	Insidious	9 (25.7)
Mean Duration illness (months)	73.06±86.2	
Precipitating Factors*	Yes	20 (57.1)
	Travel	10
	Stress	6
	Work related stress	4
	Sleep deprivation	1
	Pea consumption	1
	Egg consumption	1
	Smoke	1
	Fragrance	1
Laterality	Unilateral	18 (51.4)
	Bilateral	17 (48.6)
Relieving factors*	Yes	20 (57.1)
	Drugs	10
	Sleep	4
	Darkness	4
	Silence	3
	Massage	2
	Tea	1
	Cold sponging	1
Aggravating factors*	Yes	16 (45.7)
	Loud noise	11
	Bright light	5
	Activity	5
Diurnal Variation	Yes	14 (40.0)
	Morning	5
	Afternoon	2
	Evening	7
Associated Symptoms*	Yes	35 (100.0)

	Nausea	31
	Phonophobia	29
	Photophobia	23
	Vomiting	20
Radiating pain	Yes	27 (77.1)

*Not Mutually Exclusive

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