

Section **Psychiatry**

**Original** Article

# A Prospective Study on Migraine and its Psychiatric Co-Morbidity in a Tertiary Care Teaching Hospital

**Arun Jentilal Khatri**

Associate Professor, Department of Psychiatry, AIIMS &RC, Rajsamand.

**ABSTRACT**

**Background:** The mechanisms underlying migraine appear to be increasingly complicated. The term complex disease is used to define the nature of the illness. The wide heterogeneity of migraine accounts for the observation that a number of migraine sufferers include patients living an almost normal life and patients complaining of serious disability.  
**Methods:** Total 120 OPD cases who have migraine were included in this study. The duration of study was over a period of one year. This study was conducted in Department of Psychiatry.  
**Results:** In this study we were included total 120 OPD cases, who had complain of migraine. We identified the result according to MIGSEV & MIDAS grading.  
**Conclusions:** This study concluded that prevalence of migraine is more common in females than males.

**Keywords:** MIGSEV & MIDAS grading, Migraine, OPD cases


Available Online: 30<sup>th</sup> June 2020

Received: 24.03.20  
 Accepted: 21.04.20

**\*Corresponding Author**

**Dr. Arun Jentilal Khatri**  
 Associate Professor, Department of Psychiatry, AIIMS &RC, Rajsamand.

**Copyright:** © the author(s). IABCR is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882.

 This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial


## INTRODUCTION

Migraine is a very common disorder. It is characterized by the recurrence of painful and non-painful episodic phenomena and a variety of neurological manifestations. Thus, it is a chronic illness combined with acute signs and symptoms. The mechanisms underlying migraine appear to be increasingly complicated. The term complex disease is used to define the nature of the illness.<sup>1-2</sup> The wide heterogeneity of migraine accounts for the observation that a number of migraine sufferers includes patients living an almost normal life and patients complaining of serious disability, i.e. facing social, affective and occupational limitations.<sup>3</sup>

Though, genetic determinants are certainly at the basis of some clinical forms. The involvement of biological factors critically affects the clinical appearance of migraine. Current findings of neurogenesis have changed our approach to

migraine, emphasizing the limits of the current diagnostic and nosographic system. The diagnostic criteria of International Headache Society (IHS)<sup>4</sup> permitting a better phenotypical characterisation of patients. The importance of the role of genetics in the mechanisms of migraine is increasing. In most cases, migraine occurs as multifactorial inherited character. Thus, different genes may interact with factors intrinsic to the individual e.g. the hormone milieu or with exogenous factors e.g. psychosocial stressors related to the family or to the working environment, producing different clinical forms of the disease.<sup>5</sup>

Globally, migraine and psychiatric disorders are prevalent and burdensome conditions. They are challenging the health care systems worldwide.<sup>6-10</sup> These conditions show a large

Access this article online	
Website: www.iabcr.org	Quick Response code 
DOI: 10.21276/iabcr.2020.6.2.14	

**How to cite this article:** Khatri AJ. A Prospective Study on Migraine and its Psychiatric Co-Morbidity in a Tertiary Care Teaching Hospital. Int Arch BioMed Clin Res. 2020;6(2):PS4-PS6.  
**Source of Support:** Nil, **Conflict of Interest:** None

overlap.<sup>11,12</sup> Epidemiological studies revealed that migraine patients particularly those with chronic migraine (CM) and migraine with aura are at increased risk for major depression, anxiety, or suicidal behavior when compared to subjects without migraine.<sup>13-15</sup> According to genome-wide association study, migraine showed a higher genetic correlation with psychiatric disorders when compared to other neurological disorders.<sup>16</sup> The comorbidity between migraine and psychiatric disorders is highly pertinent in the clinical practice, as it might influence both the response to treatment and likelihood to achieve remission. Hence, an interdisciplinary approach using pharmacological and non-pharmacological treatment strategies designed to manage both migraine and comorbid psychiatric disorder is essential. The purpose of the study is to assess the prevalence and type of co-morbid psychiatric illness in migraine and to assess the relationship between the severity and disability of migraine to psychiatric illness.

**METHODS**

Study population:- Total 120 OPD cases who have migraine were included in this study.

Study Area:-This study was conducted in Department of Psychiatry.

Data collection:- Complete physical examination including a detailed neurological evaluation was done. Mental status examination was done. All subjects were screened for the presence of psychiatric illness using MINI neuropsychiatric interview by WHO. The severity of migraine attacks were quantified using MIGSEV scale. The disability due to migraine in the past 3 months was quantified using MIDAS questionnaire. The obtained data was interpreted by using descriptive statistics and chi-square test.

Data analysis: Data were analysed by using Microsoft excel.

**RESULTS**

In this study we were included total 120 OPD cases, who had complained of migraine. Among all cases more prevalent age group 26-30 which was found in 56 cases followed by 21-25(30), >36(16), 31-35(14), >20(4). In our study 96 cases were female rest were male. We also observed duration of illness which were found >1 year in 58 cases while 1-5 year in 42 cases & >5 year in 20 cases. We observed that cases were in low (44), intermediate (58), High (18) & mild (0), moderate (0), severe (18) according to MIGSEV & MIDAS grading respectively.

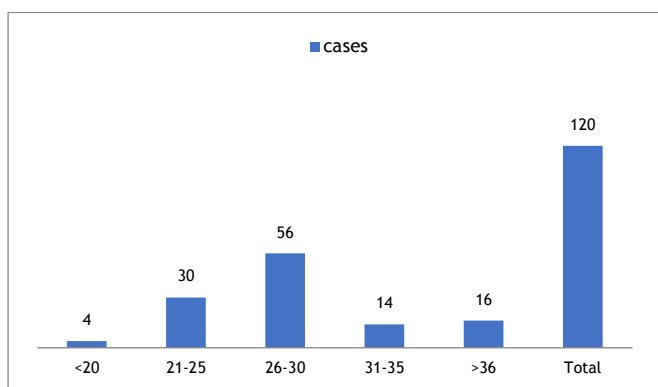


Chart:1 Distribution of cases according to age group

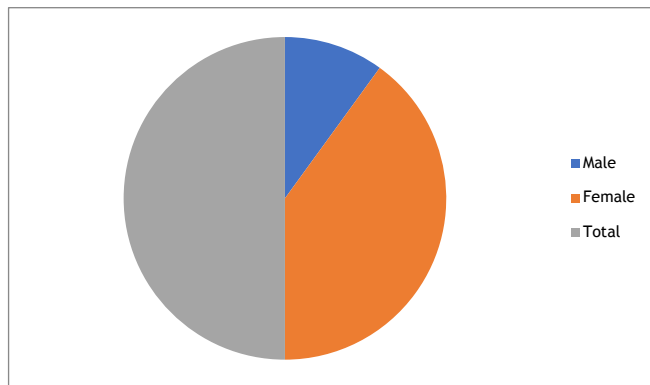


Chart:2 Distribution of cases according to age gender

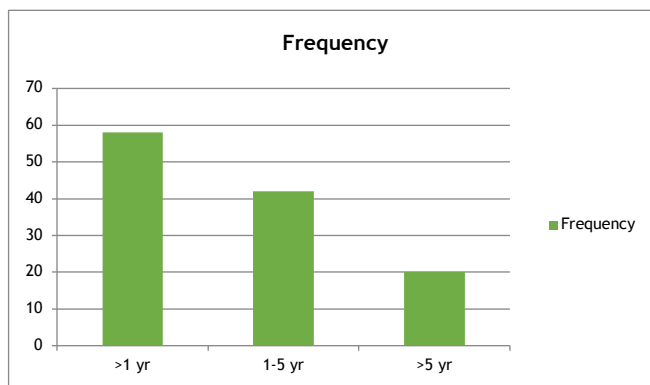


Chart:3 Distribution of cases according to age duration of illness

Table 1: Distribution of cases according to age MIGSEV & MIDAS grading

MIGSEV GRADE	MIDAS GRADE		
	Mild	Moderate	Severe
Low	44	0	0
Intermediate	22	36	0
High	0	0	18

**DISCUSSION**

Anxiety disorder, Dysthymia and Depression are some prevalent psychiatric comorbidity. This finding is consistent with many international studies. These studies state that the incidence of co-morbid psychiatric disorders increases with increasing duration of illness.<sup>17</sup> Anxiety disorder is prevalent in patients with short duration of illness but as the duration increases more than 5 years the predominant psychiatric comorbidity is dysthymia and depressive disorder. It can also be suggested that earlier phase of migraine has anxiety disorder as comorbidity but as duration of migraine illness increases it ends into a depressive disorder. Similar findings were found by Merikangas KR. *et al.*<sup>18</sup> He observed that anxiety precedes the development of depression in patients with migraine. It is also reported that as the duration of illness increases the migraine severity and disability increases. The finding of the present study revealed that when considering the disability due to migraine and severity of migraine in relationship with psychiatric comorbidity it is remarkable to note that when the severity increases the psychiatric comorbidity also increases. Patients who showed severe grades in MIDAS and MIGSEV had psychiatric comorbidity and it is only Dysthymia and Depressive

disorder. While, there is less severe grades the associated comorbidity is predominantly anxiety disorder.

This study revealed that migraine is more common in females than males. Anxiety was the most common psychiatric disorder followed by depression. It can also be concluded that co-morbid psychiatric illness is responsible for increasing the migraine severity and disability in migraine both.

## CONCLUSION

The present research concluded that, Migraine is more common in females (Females have high prevalence of co-morbid psychiatric disorders than males). Anxiety was the most common psychiatric disorder followed by depression. Co-morbid psychiatric illness increases the migraine severity and increases the disability in migraine.

## REFERENCES

1. Wessman M, Terwindt GM, Kaunisto MA, Palotie A, Ophoff RA. Migraine: a complex genetic disorder. *Lancet Neurol*. 2007;6:521–532. doi: 10.1016/S1474-4422(07)70126-6.
2. Ven RC, Kaja S, Plomp JJ, Frants RR, Maagdenberg AM, Ferrari MD. Genetic models of migraine. *Arch Neurol*. 2007;64(5):643–646. doi: 10.1001/archneur.64.5.643.
3. Stewart WF, Shechter A, Lipton RB. Migraine heterogeneity. Disability, pain intensity, and attack frequency and duration. *Neurology*. 1994;44(Suppl 4):24–39.
4. International Headache Society (2005) The International Classification of Headache Disorders. 2nd edn. (1st revision, May 2005). Available from <http://www.i-h-s.org/>. Accessed 19 February 2009
5. Montagna P. Migraine genetics. *Expert Rev Neurother*. 2008;8(9):1321–1330. doi: 10.1586/14737175.8.9.1321.
6. Group GBDNDC (2017) Global, regional, and national burden of neurological disorders during 1990-2015: a systematic analysis for the global burden of disease study 2015. *Lancet Neurol* 16(11):877–897
7. Steiner TJ, Stovner LJ, Vos T, Jensen R, Katsarava Z (2018) Migraine is first cause of disability in under 50s: will health politicians now take notice? *J Headache Pain*. 19(1):17
8. Steel Z, Marnane C, Iranpour C, Chey T, Jackson JW, Patel V et al (2014) The global prevalence of common mental disorders: a systematic review and meta-analysis 1980-2013. *Int J Epidemiol* 43(2):476–493
9. Patel V, Chisholm D, Parikh R, Charlson FJ, Degenhardt L, Dua T et al (2016) Addressing the burden of mental, neurological, and substance use disorders: key messages from disease control priorities, 3rd edition. *Lancet*. 387(10028):1672–1685
10. Walker ER, McGee RE, Druss BG (2015) Mortality in mental disorders and global disease burden implications: a systematic review and meta-analysis. *JAMA Psychiatry* 72(4):334–341
11. Seng EK, Seng CD (2016) Understanding migraine and psychiatric comorbidity. *Curr Opin Neurol* 29(3):309–313
12. Zarcone D, Corbetta S (2017) Shared mechanisms of epilepsy, migraine and affective disorders. *Neurol Sci* 38(Suppl 1):73–76
13. Radat F, Swendsen J (2005) Psychiatric comorbidity in migraine: a review. *Cephalalgia*. 25(3):165–178
14. McLean G, Mercer SW (2017) Chronic migraine, comorbidity, and socioeconomic deprivation: cross-sectional analysis of a large nationally representative primary care database. *J Comorb* 7(1):89–95
15. Trejo-Gabriel-Galan JM, Aicua-Rapun I, Cubo-Delgado E, Velasco-Bernal C (2018) Suicide in primary headaches in 48 countries: a physician-survey based study. *Cephalalgia*. 38(4):798–803
16. Brainstorm Consortium, Anttila V, Bulik-Sullivan B, Finucane HK, Walters RK, Bras J et al (2018) Analysis of shared heritability in common disorders of the brain. *Science* 360(6395):eaap8757
17. Kai-dih juang, Shuu-jiun wang, Jong-ling fuh, shiag-ru lu, Tung-ping su. (2000), Comorbidity of depressive and anxiety disorders in chronic daily headache and its subtypes. *Headache* 2000; 40:818-823.
18. Merikangas KR. Et al., (1994), Psychopathology and headache syndrome in the community. *Headache*, 34: S17-S26.

