

Triggering and Relieving Factors of Migraine**Dilip Nagarwal¹, Gograj Garhwal², Munesh Kumar**¹Assistant Professor, Department of Neurology, J.L.N Medical College, Ajmer²Assistant Professor, Department of Neurosurgery, J.L.N. Medical, Ajmer³Associate Professor, Department of Medicine, J.L.N Medical College, Ajmer

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Abstract:**Background:** Migraine is a highly disabling primary headache disorder with a 1-year prevalence of ~15% in the general population. According to the Global Burden of Disease Study, migraine is the second most prevalent neurological disorder worldwide and is responsible for more disability than all other neurological disorders combined**Methods:** This is a cross sectional study. We retrospectively reviewed the records of 250 migraine patients at Department of Neurology, J. L. N. Medical College, and Ajmer. Data were collected through a predesigned questionnaire containing information on age, sex, social status and a predetermined list of precipitating and relieving factors.**Results:** In this study, the female patients predominated. Most of the patients were within 21–30 years age group and belonged to middle class families. The common precipitating factors like stress sleep deprivation, anxiety, activity, cold and warm. In consideration of relieving factors of pain, different maneuvers were commonly tried by migraineurs, which relieved migraine headache. No statistically significant association was noted between any of the factors and the sex of the participants.**Conclusion:** The triggering and relieving factors of migraine were comparable between men and women. Some triggering factors such as anxiety, and fatigue were found significant among women.**Keywords:** Migraine, Triggering, Relieving.This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.**Introduction**

Migraine is a highly disabling primary headache disorder with a 1-year prevalence of ~15% in the general population. [1-2] According to the Global Burden of Disease Study, migraine is the second most prevalent neurological disorder worldwide and is responsible for more disability than all other neurological disorders combined. [3]

Migraine manifests clinically as recurrent attacks of headache with a range of accompanying symptoms. In approximately one third of individuals with migraine, headache is sometimes or always preceded or accompanied by transient neurological disturbances, referred to as migraine aura. [4] Furthermore, a minority of those affected develop chronic migraine, in which attacks become highly frequent. The pathogenesis of migraine is widely believed to involve peripheral and central activation of the trigeminovascular system, and cortical spreading depression is thought to be the underlying neurophysiological substrate of migraine aura. [5-6]

Material and methods**Type of study:** Cross-sectional study**Sample size:** 200 patients with migraine**Study place:** Department of Neurology, J. L. N. Medical College Ajmer**Method of data collection:** Data were collected through a predesigned questionnaire containing information on age, sex, social status and a predetermined list of precipitating and relieving factors.

Data analysis- Data analysis was done using licensed SPSS software version 21.0 (Chicago, Illinois). Univariate analyses were done initially and the results were presented with the help of tables, text, bar-diagrams and pie-charts. Descriptive statistics were used to calculate frequencies of categorical variables, and measures of central tendencies and dispersion were used to describe continuous variables. Independent t-test and ANOVA test were used to compare the continuous variable and chi-square test was used for categorical variables. Non parametric Mann Whitney test and Kruskal Wallis test were used in case of data did not follow a normal distribution. Data are presented as mean (standard deviation) or number or proportions. A p-value <0.05 was considered as statistically significant.

Results

Table 1: Socio-demographic profile

Mean age	27.36±12.39 yrs
Female : Male	162 : 88
Socio-economic status (lower : Middle : Upper)	102 : 88 : 60

Table 2: Precipitating factors

Sun light	110 (44)
Fatigue	34 (13)
Stress	81 (32)
Sleep deprivation	52 (20)
Cold	24 (9)
Warm	16 (6)
Activity	34 (14)
Food	7 (2.8)
Reading	11 (4)

Table 3: Relieving factors

Drug	152 (61)
Sleep	146 (58)
Rest	25 (10)
Posture	4(1.6)

In this study, the female patients predominated. Most of the patients were within 21–30 years age group and belonged to middle class families. The common precipitating factors like stress sleep deprivation, anxiety, activity, cold and warm. In consideration of relieving factors of pain, different maneuvers were commonly tried by migraineurs, which relieved migraine headache.

No statistically significant association was noted between any of the factors and the sex of the participants.

Discussion

Different precipitating factors for headache that we studied had been described by several authors previously. [6-7] Factors related to endogenous psychogenic mechanism like stress, anxiety were well distributed among both groups as precipitator. Rasmussen [8] also reported stress and mental tension as most frequent precipitants for both migraine and tension type of headache. In a study of 494 patients with migraine headache Robbins L et al. [9] observed similarly that stress was the most cited precipitating factor. Stress/ anxiety do so by central mechanism through direct activation of the ascending reticular pathway.

Other factors like journey, physical activity, exposure to cold/warm, reading were also common in both group of patients and did not show any significant difference. Contrary to this finding, in a population based study in Croatia Zivadinov R et al. [10] showed that stress was associated with migraine whereas physical activity was related to TTH. Journey, change in weather and temperature were also associated among patient of migraine with aura in his study. The difference might account on the

social and environmental variation among population. Similar to Spierings ELH et al. [11] we didn't find any precipitating factor that was significantly reported frequently by TTH patients than the migraineurs. Most of the people with headache disorders practice many nonpharmacological measures to get the relief of the pain. However, it is not known whether behavior during the attack is headache-type-specific or a general response to head pain. Martins and Prarreira et al [12] identified six maneuvers tried by the patients, most commonly the migraineurs to improve the headache during and attack. It is a common observation, by clinicians involved in the headache field that many patients use some instinctive manoeuvres, of their own accord that tend to alleviate their suffering.

Conclusion

The triggering and relieving factors of migraine were comparable between men and women. Some triggering factors such as anxiety, and fatigue were found significant among women.

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