Evaluation of awareness of triggers of headache in migraine patients

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ABSTRACT

Background: A number of intrinsic or extrinsic factors are known to trigger the migraine attack. The present study was conducted to evaluate awareness of triggers of headache in migraine patients.

Materials & Methods: 85 patients of with migraine with or without aura of both genders were selected from Bolangir, Odisha. Each patient was asked to enumerate self- perceived triggers of migraine spontaneously and patients were directed to make a selection from a list of the identified common. Responses of subjects were calculated.

Results: Out of 85 patients, males were 38 and females were 47. Occupation was student 30, self-employed 16, employed 14 and house wife 25. Education was primary in 24, middle in 16, high in 27 and graduate in 18. Diagnosis was migraine with aura in 22 and migraine without aura in 63. The difference was significant (P< 0.05). Common triggers were excessive sleep in 11, sleep deprivation in 62, stress in 68, fatigue in 52, exercise in 34, menstrual periods in 27, emotional changes in 51, weather changes in 18, sunlight in 70, noise in 75, fasting in 39, smoking in 60, odour in 24, alcohol in 45, travelling in 7, cheese in 5, travelling in 2, sexual activity in 10 and handwash in 3 cases. The difference was significant (P< 0.05).

Conclusion: Common triggers for migraine was sleep deprivation, stress, smoking, fatigue, emotional changes, sunlight, noise and alcohol.

Key words: alcohol, migraine, headache

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Introduction

A number of intrinsic or extrinsic factors are known to trigger the migraine attack. Underlying trigger factors of migraine vary between individuals and even between attacks in any given patient.[1]The important triggers are stress, weather changes, fatigue, food and beverages, sleeplessness, hunger, and menstruation.[2]

Social and cultural factors in different regions can vary thereby influencing the significance of triggering factors.[3,4] The knowledge about migraine triggers is important for proper management of the patients. There is paucity of studies from India on migraine triggers.[5] Migraine patients have poor awareness of their headache triggers and hardly recognize a trigger unless asked specifically. Effort should be made towards detailed enquiry into possible headache triggers and to create awareness about these triggers.[6] Alleviating headache triggers by educating the patients and stressing on the importance of their avoidance, is an integral part of migraine therapy to reduce the burden of unnecessary pharmacotherapy. Furthermore, such an information exchange may help patients, as well as physicians, to personalize the therapy.[7]

The association between the prevalence of migraines and the socioeconomic status (SES) is unknown; however, based on clinical studies, it results in a significant disability with an enormous socioeconomic burden in addition to negatively affecting the person's daily life, job performance and social activities, while depending on the level of severity, it can substantially impair quality of life.[8,9,10] The present study was conducted to evaluate awareness of triggers of headache in migraine patients.

Materials & Methods

The present study comprised of 85 patients of with migraine with or without aura of both genders. The study was conducted in Bolangir Odisha from Jan 2020 to Dec 2021 The consent was obtained from all enrolled patients. Patients were diagnosed with migraine with or without aura according to the current criteria of the International Classification of Headache Disorders, 3rd edition (ICHD-3).

Data such as name, age, gender, occupation, income of family, education, marital status etc. was recorded. A thorough examination was done. Each patient was asked to enumerate self-perceived triggers of migraine spontaneously and patients were directed to make a selection from a list of the identified common. Responses of subjects were calculated. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

Results

Table I Distribution of patients

Total-		
Gender	**Males**	**Females**
Number	38	47

Table I shows that out of 85 patients, males were 38 and females were 47.

Table II Assessment of parameters

Parameters	Variables	Number	P value
occupation	student	30	0.92
	Self- employed	16	
	employed	14	
	House wife	25	
education	Primary	24	0.81
	Middle	16	
	high	27	
	graduate	18	
Diagnosis	Migraine without aura	22	0.01
	Migraine without aura	63	

Table II, graph I shows that occupation was student 30, self- employed 16, employed 14 and house wife 25. Education was primary in 24, middle in 16, high in 27 and graduate in 18. Diagnosis was migraine with aura in 22 and migraine without aura in 63. The difference was significant (P< 0.05).

Graph I Assessment of parameters

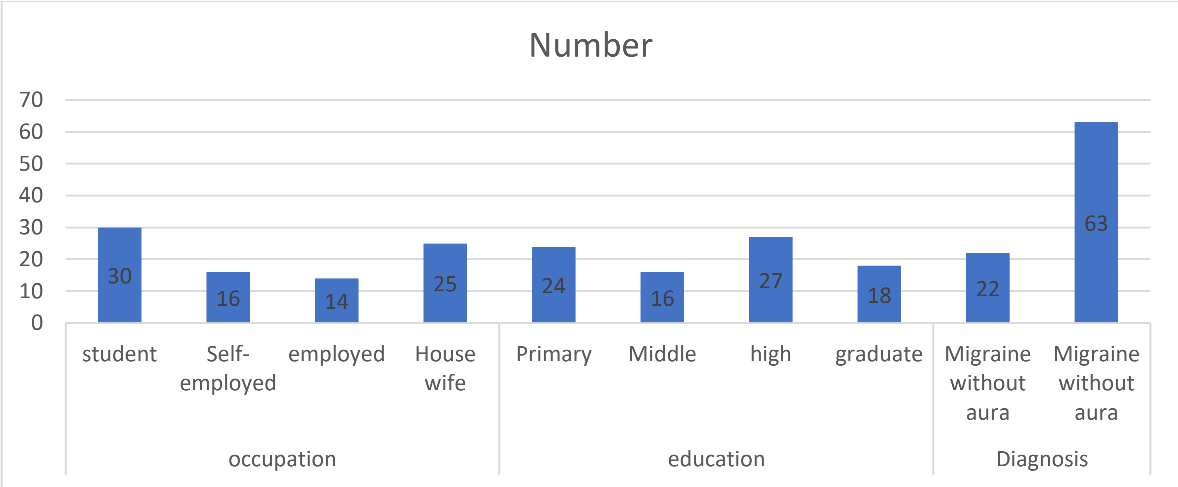
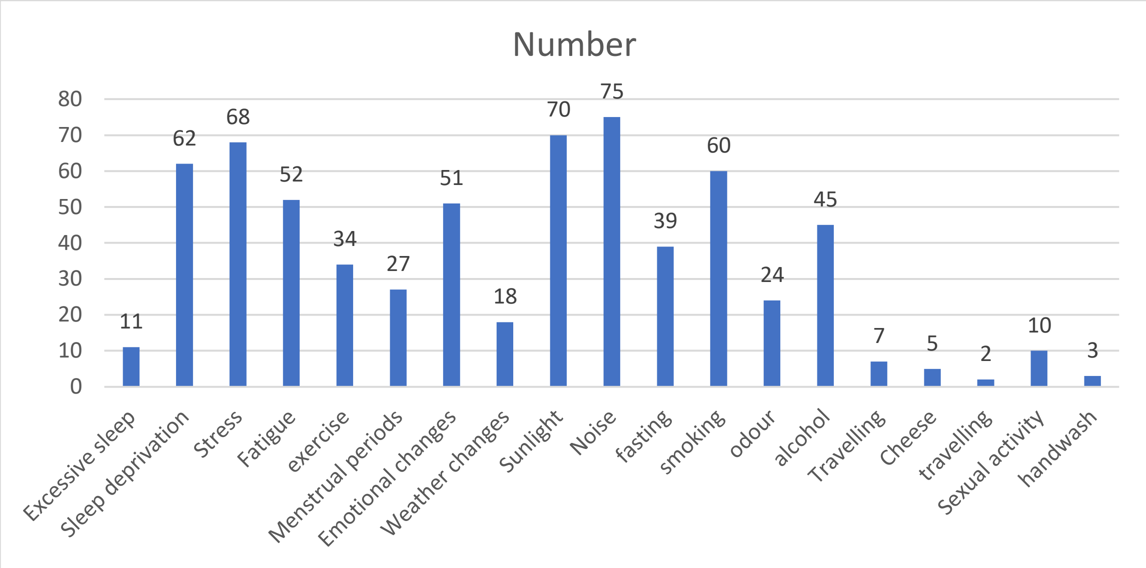


Table III Record of common triggers

Common triggers	Number	P value
Excessive sleep	11	0.01
Sleep deprivation	62	
Stress	68	
Fatigue	52	
exercise	34	
Menstrual periods	27	
Emotional changes	51	
Weather changes	18	
Sunlight	70	
Noise	75	
fasting	39	
smoking	60	
odour	24	
alcohol	45	
Travelling	7	
Cheese	5	
travelling	2	
Sexual activity	10	
hand wash	3	

Table III, graph I shows that common triggers were excessive sleep in 11, sleep deprivation in 62, stress in 68, fatigue in 52, exercise in 34, menstrual periods in 27, emotional changes in 51, weather changes in 18, sunlight in 70, noise in 75, fasting in 39, smoking in 60, odour in 24, alcohol in 45, travelling in 7, cheese in 5, travelling in 2, sexual activity in 10 and handwash in 3 cases. The difference was significant (P< 0.05).

Graph II Record of common triggers



Discussion

Migraine is one of the commonest causes of headache and is attributed to activation of meningeal perivascular pain fibres and increased sensitization of central pain neurons that process information from intracranial structures and extracranial skin and muscles.[11,12] Despite a lack of knowledge on migraine's pathogenesis, a great deal of evidence suggests both genetic and environmental factors, such as hormonal fluctuations, fatigue, stress, meteorological changes, and diet, modulating the threshold of migraine that precedes and evokes a migraine attack.[13,14] The present study was conducted to evaluate awareness of triggers of headache in migraine patients.

We found that out of 85 patients, males were 38 and females were 47. Occupation was student 30, self- employed 16, employed 14 and house wife 25. Education was primary in 24, middle in 16, high in 27 and graduate in 18. Diagnosis was migraine with aura in 22 and migraine without aura in 63. Ravishankar et al[15] analysed this unusual trigger link in 94 out of 1500 Indian patients who fulfilled the International Headache Society criteria for migraine. In 11 patients, hair wash was the only trigger; in 45 patients hair wash was one of the triggers and in 38 patients, hair wash was a trigger concurrently and in combination with another common trigger. The effect of episodic and long-term prophylaxis in preventing this trigger-like headache has been analysed. The underlying pathophysiological basis is not established but it is important for this unusual regional trigger to be identified and incorporated in the management strategy.

We observed that common triggers were excessive sleep in 11, sleep deprivation in 62, stress in 68, fatigue in 52, exercise in 34, menstrual periods in 27, emotional changes in 51, weather changes in 18, sunlight in 70, noise in 75, fasting in 39, smoking in 60, odour in 24, alcohol in 45, travelling in 7, cheese in 5, travelling in 2, sexual activity in 10 and handwash in 3 cases. Yadav et al[16] evaluated the migraine triggers in consecutive patients and correlate these with demographic and clinical variables. A total of 182 patients with migraine were included whose age ranged between 14 to 58 years and 131 were females. Duration of migraine ranged between 6 and 260 months. Endogenous and exogenous migraine triggers were inquired using a questionnaire. Severity of migraine, associated symptoms, and functional disability were recorded. Presence of trigger was correlated with various demographic and clinical variables. Migraine triggers were present in 160 (87.9%) patients and included emotional stress in 70%, fasting in 46.3%, physical exhaustion or traveling in 52.5%, sleep deprivation in 44.4%, menstruation in 12.8%, and weather changes in 10.1% patients. Multiple triggers (>2) were present in 34.4% patients. The triggers in the Indian migraine patients are similar to other populations but for dietary factors.

Ierusalimschy R et al[17] in their study the distribution of triggers of migraine in a selected population, 100 patients who fulfilled the diagnostic criteria for migraine without aura as proposed by the International Headache Society were evaluated by means of a personal interview. Stress was the most cited trigger, triggering migraine in 76%. Afterwards, in descending order of frequency, were cited sensorial stimuli (75%), sleep deprivation (49%), hunger (48%), environmental factors (47%), food (46%), menses (39%), fatigue (35%), alcohol (28%), sleep excess (27%), caffeine (22%), physical exertion (20%), head trauma (20%), trips (4%), sexual activity (3%), medications (2%), neck movements (2%), smoking (1%) and the use of a low pillow (1%). It is concluded that certain factors seem to play an important role in the triggering of migraine.

Conclusion

Authors found that common triggers for migraine was sleep deprivation, stress, smoking, fatigue, emotional changes, sunlight, noise and alcohol.

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