Harsukh Educational Charitable Society
International Journal of Community Health and Medical Research
Journal home page:www.ijchmr.comdoi: 10.21276/ijchmr

ISSN E: 2457-0117 **ISSN P:**2581-5040 **Index Copernicus** ICV 2018=62.61

Original Research

Assessment of clinical profile of children suffering from migraine

Abhishek Singh

Associate professor, Department of Paediatric, LLRM Medical College, Meerut, Uttar Pradesh, India

***ABSTRACT*:**
Background: Migraine is a common complaint in the pediatric population. The present study was conducted to assess the clinical profile of children with migraine. **Materials & Methods:** The present study was conducted on 108 children age ranged 4-16 years of age of both genders. The confirmation of diagnosis was based on ICHD–II 2004 diagnostic criteria for headache. Clinical features and number of attacks in all patients were recorded. **Results:** Out of 108 patients, boys were 60 and girls were 48. 46 patients had every day attack, 28 had 3 days/ week, 14 had 2 days/ week, 10 had 1 day/ month, 8 had 2 days/ month and 2 had 3 days/ month. The difference was significant (P< 0.05). Patients had nausea, vomiting (44), dizziness (30), photophobia (24) and insomnia, red eyes (10). The difference was significant (P< 0.05). **Conclusion:** Migraine is common childhood disease. Early detection and management may prevent further complication. Most common symptoms in patients were nausea, vomiting, dizziness, photophobia, insomnia and red eyes.
Key words: Migraine, Pediatric, photophobia

Corresponding author: Dr. Abhishek Singh, Associate professor, Department of Paediatric, LLRM Medical College, Meerut, Uttar Pradesh, India

This article may be cited as: Singh A. Assessment of clinical profile of children suffering from migraine. HECS Int J Comm Health Med Res 2019; 5(2):45-47

INTRODUCTION

Migraine is a common complaint in the pediatric population. It is a hereditary disorder with a multifactorial inheritance pattern: when interviewing both parents of a child, at least one of them gives a history of migraine in over 90% of cases. Migraine is a form of periodic headache usually located on one side of the head with variations in frequency, severity, localization and duration.
10% of children aged 5-15 years have migraine and migraine also accounts for 75% of headaches in young children referred for neurological consultation.[1]
Migraine is now considered to be a primary neuronal process. A fundamental concept is that migraine patients have a hyperexcitable cortex. Multiple genetic influences cause disturbances of neuronal ion channels (e.g., calcium channels), which lead to a lowered threshold for a variety of external and/or internal stimuli that then trigger episodes of regional neuronal excitation followed by cortical spreading depression (CSD).[2] CSD represents a slowly propagating wave of neuronal depolarization. It has been proposed to be the initial phase responsible for migraine aura and the activation of the trigeminovascular system. Difficulties may be encountered when making a diagnosis of migraine in childhood. Besides, long lasting attacks may affect daily activities and cause absence from school.[3] The present study was conducted to assess the clinical profile of children with migraine.

MATERIALS & METHODS

The present study was conducted in the department of Pediatrics. It comprised of 108 children age ranged 4-16 years of age of both genders. The study protocol was approved from ethical committee. All parents were informed regarding the study and written consent was obtained.
Patient's information such as name, age, gender etc. was recorded. The confirmation of diagnosis was based on ICHD–II 2004 diagnostic criteria for headache. A thorough physical examination was done along with electroencephalography (EEG) and computerized brain tomography and magnetic resonance imaging (MRI). Clinical features and number of attacks in all patients were recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 108		
Gender	**Boys**	**Girls**
Number	60	48

Table I shows that out of 108 patients, boys were 60 and girls were 48.

Table II Number of attacks in patients

Attacks	Number of patients	P value
Every day	46	0.01
3 days/ week	28	
2 days/ week	14	
1 day/ month	10	
2 days/ month	8	
3 days/ month	2	

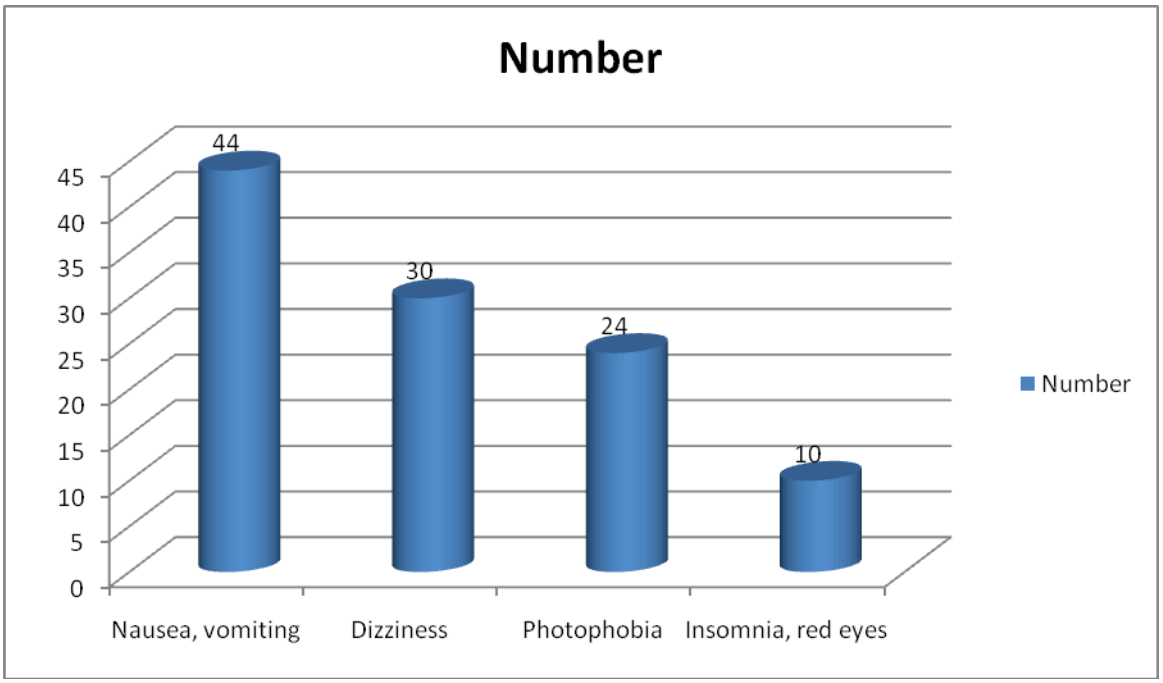
Table II shows that 46 patients had every day attack, 28 had 3 days/ week, 14 had 2 days/ week, 10 had 1 day/ month, 8 had 2 days/ month and 2 had 3 days/ month. The difference was significant (P< 0.05).

Table III Clinical profile of patients

Clinical profile	Number	P value
Nausea, vomiting	44	0.01
Dizziness	30	
Photophobia	24	
Insomnia, red eyes	10	

Table III shows that patients had nausea, vomiting (44), dizziness (30), photophobia (24) and insomnia, red eyes (10). The difference was significant (P< 0.05).

Graph I Clinical profile of patients



DISCUSSION

Migraine is a highly disabling condition that leads to reduced quality of life among children. Approximately 25% of children will be migraine- free by the age of 25, boys in a significantly higher percentage than girls and more than half will still have headaches at the age of 50. The pain in migraine is generated by neurogenic inflammation of the meningeal vessels as well as sensitization of peripheral and central trigeminal afferents.[4] The CSD initiates vascular dilation with extravasation of plasma proteins from dural vessels. The neurogenic inflammation is mediated primarily by neuropeptides including calcitonin gene related peptide (CGRP) and substance P. This inflammatory cascade stimulates nociceptive afferents leading to activation of trigeminal meningeal afferents leading to severe migraine pain.[5]

The most common symptoms include episodic attacks of moderate to very severe headache (typically throbbing, unilateral, and exacerbated by physical activity), accompanied by nausea, photophobia and phonophobia. Attacks are heterogeneous in symptomatology, severity and disability, both between different individuals and separate attacks in the same individual sufferer.[6] The present study was conducted to assess the clinical profile of children with migraine.

In present study, there were 60 boys and 48 girls. All patients were in age range 4-16 years. We found that 46 patients had every day attack, 28 had 3 days/ week, 14 had 2 days/ week, 10 had 1 day/ month, 8 had 2 days/ month and 2 had 3 days/ month.

Brna et al[7] found that migraine was the most common cause of headache in the patients of present pediatric neurology outpatient clinic (57.1%, 76/133). The mean age of patients was 11.08±3.27 yrs. The number of girls as the age increased (groups II and III). The mean headache attacks rate was 2.5±1.5 per week, which resulted in worsening of school performance (n=26, 34.2%). In the majority of patients (n= 54, 71.1%), there was a family history of migraine or headache in the close relatives. Prophylaxis was found effective for all given medications (flunarizine: 46/54, propranolol: 19/21, topiramate: 10/10, sodium valproate: 1/1).

We observed that patients had nausea, vomiting (44), dizziness (30), photophobia (24) and insomnia, red eyes (10). Lewis et al.[8] found that the prevalence of migraine was reported as 1.2–3.2% at ages 3–7 (more common in boys), 4–11% at ages 7–11 (equal for boys and girls), and 8-23% at 11–15 ages (more common in girls).

The first step in avoiding migraine attacks is recognizing and eliminating the triggering factors such as dietary: alcoholic beverages, caffeine excess, artificial sweeteners, tyramine (aged cheeses, smoked fish, cured meats), nitrates and nitrites, monosodium glutamate, environmental: media abuse, odors, medication: cimetidine, estrogen, histamine, hydralazine, nifedipine, nitroglycerin, ranitidine, reserpine, long-term use of nonsteroidal anti-inflammatory drugs.[9]

CONCLUSION

Migraine is common childhood disease. Early detection and management may prevent further complication. Most common symptoms in patients were nausea, vomiting, dizziness, photophobia, insomnia and red eyes.

REFERENCES

1. Barnes N, Millman G, James E. Migraine headache in children. Clin Evid. 2006;15:469–75.
2. Meloff KL. Headaches in children. Cause for parental concern but commonly benign. Postgrad Med. 1982;72:195–199–202.
3. Sillanpaa M, Piekkala P, Kero P. Prevalence of headache at preschool age in an unselected child population. Cephalalgia. 1991;11:239–42.
4. Saper JR. Diagnosis and symptomatic treatment of migraine. Headache. 1997;37:1–14.
5. Ottman R, Hong S, Lipton RB. Validity of family history data on severe headache and migraine. Neurology. 1993;43:1954–60.
6. Saper JR, Silberstein SD, Gordon CD, Hamel RL. Medications used in the pharmacotherapy of headache. In: Silberstein SD, Lipton RB, editors. Handbook of headache management: A practical guide to diagnosis and treatment of head, neck, and facial pain. Baltimore: Lippincott Williams & Wilkins; 1993; 35–47.
7. Brna PM, Dooley JM. Headaches in the pediatric population. Semin Pediatr Neurol. 2006;13:222–30.
8. Lewis, Olesen J. Some clinical features of the acute migraine attack. An analysis of 750 patients. Headache. 1978; 18:268–71.