

Evaluation of Clinical Profile of Migraine in Pediatric Patients

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ABSTRACT

Background: Headache is a common chief complaint in pediatric offices and may be a symptom of a host of illnesses from viral infection to intracranial neoplasm to migraine. The present study was conducted to assess the profile of migraine in children.

Materials & Methods: This study was conducted on 348 pediatric patients of both genders. Information such as name, age, gender, type of house, mother's education, duration of illness, site of headache, frequency of headache were recorded. Symptoms such as visual disturbances, vomiting, abdominal pain etc. were recorded.

Results: Out of 348 patients, 210 were males while 138 were females. Clinical features were nausea/ vomiting seen in 310 patients, visual disturbances in 280, vertigo in 302 patients and more than 1 symptom in 238 patients. The difference was significant ($P < 0.05$).

Conclusion: Migraine headache is not uncommon in children.

Common clinical features were nausea/ vomiting, visual disturbances and vertigo.

Key words: Migraine, Pediatrics, Psychological Stress.

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INTRODUCTION

Headache is a common chief complaint in pediatric offices and may be a symptom of a host of illnesses from viral infection to intracranial neoplasm to migraine.¹ Migraine is a primary headache disorder characterized by recurrent headaches. The clinical spectrum of migraine represents a significant subset of headache, occurring typically as recurrent, episodic attacks of head pain plus a variety of accompanying symptoms, separated by symptom-free intervals.² Its most common form, migraine without aura, is characterized as intense frontal or temporal headache lasting from 1 to 48 hours, accompanied by autonomic symptoms such as nausea, vomiting, and sensitivity to light and sound. Occasionally, migraine with aura in children is accompanied by dramatic neurologic signs and symptoms such as hemiparesis, language or mental status disturbances, visual disorders, or oculomotor dysfunction.³

It is quite common in adults with prevalence rate of 20%. Migrainous headache is prevalent in 4% of children in the age group 7 to 15 years. Migraine in children interferes with the school performance and the school attendance. For diagnosis of migraine, the headache must be recurrent and separated by symptom free intervals and be accompanied by atleast 3 of the

following 6 symptoms: abdominal pain, throbbing quality to the pain; nausea or vomiting; localized unilateral headaches or hemicrania; complete relief after a brief period of sleep; an aura which may be visual, sensory, motor; and a family history of migraine as suggested by Prensky's criteria.⁴ The present study was conducted to assess the profile of migraine in children.

MATERIALS & METHODS

The present study was conducted in the Department of Pediatrics, Narayan Medical College and Hospital, Sasaram, Bihar (India) and it included assessment of clinical profile of patients with migraine. Ethical approval was obtained from institutional ethical committee and written consent was obtained from guardians / parents of all the patients after explaining in detail the entire study protocol. A total of 348 patients were enrolled in the present study. Information such as name, age, gender, type of house, mother's education, duration of illness, site of headache, frequency of headache were recorded. Symptoms such as visual disturbances, vomiting, abdominal pain etc. were recorded. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I shows that out of 348 patients, male child were 210 and female child were 138. The difference was significant ($P < 0.05$). Table II shows that clinical features were nausea/ vomiting seen in 310 patients, visual disturbances in 280, vertigo in 302 patients and more than 1 symptoms in 238 patients. The difference was significant ($P < 0.05$). Graph I shows that precipitating factors were psychological stress seen in 310, physical strain in 258, watching TV in 324, sunlight in 286, hunger in 325 and more than 1 of above factors in 128 patients.

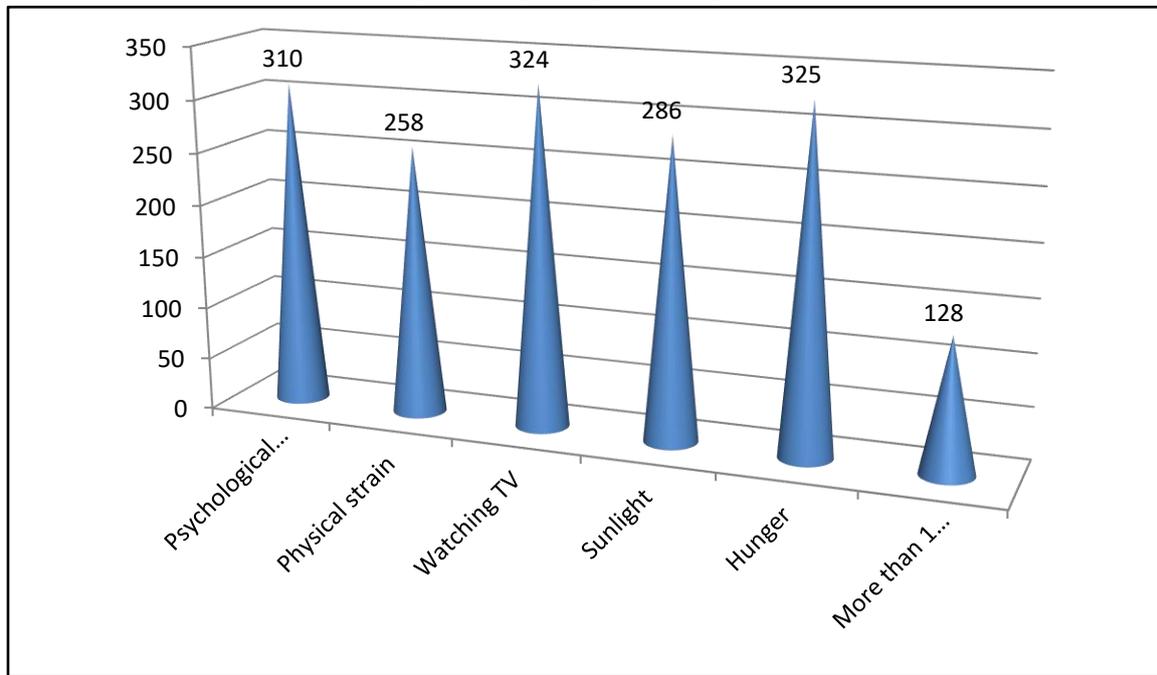
Table I: Distribution of patients

Gender	Male	Female	Total
Number	210	138	348

Table II: Clinical features in patients

Clinical features	Number	P value
Nausea/ vomiting	310	0.01
Visual disturbances	280	
Vertigo	302	
More than >1 symptoms	238	

Graph I: Precipitating factors in patients



DISCUSSION

Migraine headache in childhood is a serious matter. Migraines may be induced by triggers, with some reporting it as an influence in a minority of cases and others the majority. Many things such as fatigue, certain foods, and weather have been labeled as triggers; however, the strength and significance of these relationships are uncertain.⁴ There is four possible phases to a migraine. The prodrome which occurs hours or days before the headache. The aura immediately precedes the headache. The pain phase also known as headache phase and the postdrome, the effects experienced following the end of a migraine attack.⁵ The present study was conducted to assess the profile of migraine in children.

In our study, out of 348 patients, male child were 210 and female child were 138. A et al⁶ in its cross-sectional, questionnaire study, 76 children from ages 8 to 17 years were included. Thirty seven were classified as migraineurs, 39 as non-migraineurs. Participants filled in a questionnaire surveying the areas of physical, socio-economic and school functioning. Migraineurs further answered migraine-specific questions. The study included 33 (43.4%) males and 43 (56.6%) females. Median age was 13.00 (10.00–16.00) years. Average age of onset for migraine was 9.22 ± 3.34 years. Non-migraineurs skipped trendwise fewer meals and exercised more often. In socio-economic functioning, the father's nationality being Austrian might be related to migraine.

Children with migraine had a significantly lower quality of life in school functioning and had significantly less often “good” grades than children without migraine.

We found that clinical features were nausea/ vomiting seen in 310 patients, visual disturbances in 280, vertigo in 302 patients and more than 1 symptoms in 238 patients. Preventive treatments of migraines include medications, nutritional supplements, lifestyle alterations, and surgery. Prevention is recommended in those who have headaches more than two days a week, cannot tolerate the medications used to treat acute attacks, or those with severe attacks that are not easily controlled.⁷

Migraine represents a common health problem in our society and can already start early in life, affecting children and adolescents. In literature, data on characteristics, triggering factors and impact of migraine on quality of life are based on epidemiological population studies. However, as far as we know this is the first report on pediatric migraine patients in an Austrian cohort. To identify the impact of the disease on the patients' quality of life with regards to physical and socioeconomic functioning we conducted a monocentric, cross-sectional questionnaire study on children and adolescent migraine patients and compared the results to age and sex-matched healthy non-migraineurs. Due to the monocentric approach, only 76 pediatric patients were enrolled in this study, which might explain some of the non-

significant results being in contrast to reports in literature, such as a possible association of migraine and gender or age.⁸ Casucci et al⁹ described migraine prevalence to be significantly higher in children with native-born, non-Hispanic white parents than those with Hispanic, immigrational background. Millichap et al¹⁰ reported on a higher headache prevalence in immigration families. Therefore, assuming a relation between paternal nationality and migraine is questionable and needs to be addressed in future studies in more detail. Not only the parental nationality background but also educational and socio-economic status of the family might influence migraine in children. Parents with a low educational level have more often children with headaches.

Migraine variants are common during infancy and early childhood in males by Teixeira et al. On the other hand, complicated migraines other than migraine variants are common in young females. Martens et al, studied 209 children presenting with headache and reported a mean age of 11.3 years, female 56.5%, unclassified headache: 23.4%; probable migraine 17.2%, migraine without aura 13.4%, complicated migraine 12.4%, migraine with aura 1.0%; tension-type 15.3%, and cluster headaches 0.5%, and secondary headaches 16.7%. Because complicated migraines manifest as an acute cerebral dysfunction other than headache, considering the diagnosis of migraine as a subgroup may present hesitancy and its vividness and unfamiliarity provoke anxiety which results in an extensive work up. In practice, most complicated migraine presents with the isolated sign or symptom. The isolated manifestation may occur independently, together, or in the midst of the migraine attack. However, some may present with more than one neurologic or medical manifestation. Such patients should be screened for concomitant use of daily analgesic, contraceptive pill, and elevated body mass index. The headache is not a presenting symptom of complicated migraine. However, headaches often coexist with attack of complicated migraine. Psychosomatic and autonomic presenting symptoms in migraines are commonly encountered but they are infrequently realized. These include palpitations, chest pain, depression, anxiety and panic disorders, and mood disorder. Young children may present with episodic behavioral problems such as being inattentive, poor impulse control, irritable, and/or socially withdrawn. Rarely, hypomania has been reported. In such situations, commonly alternative diagnoses other than migraine or no diagnosis is made.¹¹⁻¹⁴

CONCLUSION

Authors concluded that migraine headache is not uncommon in children. Common clinical features were nausea/ vomiting, visual disturbances and vertigo.

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