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Original Research

Assessment Of Type Of Headache In Children

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ABSTRACT

Background: To assess type of headache in children.

Materials and Methods: One hundred ten children age ranged 4 years to 10 years of both genders were selected. A thorough clinical examination and type of headache was recorded in case history proforma. A detailed neurological examination including ophthalmoscopy was performed on children with headache**.**

Results: Out of 110 patients, boys were 50 (45.4%) and girls were 60 (54.6%). Age group 4-6 years had 38, 6-8 years had 32 and 8-10 years had 40 patients. The difference was significant (P< 0.05). Type of headache was tension headache in 10, migraine in 46, migraine-like headache in 42, and non-specific headache in 12 patients. The difference was significant (P< 0.05).

Conclusion: The most common type of headache was migraine. Maximum number of pediatric headache was seen in 8-10 years of age.

Keywords: Children, Headache, Migraine.

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INTRODUCTION

Headache affects children of all ethnic and socioeconomic groups. Primary headaches have a complex genetic basis and follow the biopsychosocial model in clinical presentation, trigger factors, comorbidity and in response to treatment.[1] The trigeminocervical complex in the brainstem, with its extensive network of neuronal connections to the cerebral cortex, the thalamus, the vascular system and the dura matter, plays an important role in the pathogenesis of migraine attacks and possibly other headache disorders.[2,3] Physiological, environmental or emotional factors may trigger a micro-neuroinflammation in genetically predisposed individuals, causing an increase in vascular permeability, plasma extravasation and neurotransmitters release leading to the secondary neurological, sensory and pain phenomena.[4] Episodic tension-type headache (TTH) is the most common headache disorder with a prevalence of 12–25% followed by migraine at around 8%. Chronic TTH affects around 1% of children (mainly adolescents).[5,6] Other primary headaches are rare and reliable data are hard to find. Chronic daily headache, commonly due to TTH, is a common cause of referral to specialist clinics and may be disproportionately represented.[7] The diagnostic criteria for migraine defined by the International Headache Society' are now widely accepted and have

been applied successfully to studies on the epidemiology of migraine in adults."[8] We performed this study to assess type of headache in children.

MATERIALS & METHODS

After considering the utility of the study and obtaining approval from ethical review committee, we selected one hundred ten children age ranged 4 years to 10 years of both genders. Parents' consent was obtained before starting the study.

Data such as name, age, gender etc. was recorded. All cases were diagnosed based on criteria proposed by International Headache Society. A thorough clinical examination and type of headache was recorded in case history proforma. A detailed neurological examination including ophthalmoscopy was performed on children with headache. The results were compiled and subjected for statistical analysis using Mann Whitney U test. P value less than 0.05 was set significant.

RESULTS

Table I Patients distribution

Total- 110		
Gender	**Boys**	**Girls**
Number (%)	50 (45.4%)	60 (54.6%)

Out of 110 patients, boys were 50 (45.4%) and girls were 60 (54.6%) (Table I).

Table II Age wise distribution of patients

Age group (Years)	Number	P value
4-6	38	0.92
6-8	32	
8-10	40	

Age group 4-6 years had 38, 6-8 years had 32 and 8-10 years had 40 patients. The difference was significant (P< 0.05) (Table II).

Table III Type of headache

Headache	Number	P value
Tension headache	10	0.02
Migraine	46	
Migraine-like headache	42	
Non-specific headache	12	

Type of headache was tension headache in 10, migraine in 46, migraine-like headache in 42, and non-specific headache in 12 patients. The difference was significant (P< 0.05) (Table III).

DISCUSSION

Headache is a common problem in the pediatric population. A significant number of children report having had a headache at some point.[9] About 37% to 51% of elementary school children report a previous episode of headache on initial presentation.[10,11] By age 15 years, at least 75% of adolescents will have experienced a headache. Of those reporting headache, 2.5% of young

elementary school children and 15% of adolescents experience recurring headaches.[12,13] These headaches often result in significant impairment to a child's quality of life. While headache in pediatric patients results from life-threatening illnesses in only 6% of cases.[14,15] We performed this study to assess type of headache in children.

Our results showed that out of 110 patients, boys were 50 (45.4%) and girls were 60 (54.6%). Karwautz et al[16] investigated 341 children and adolescents to evaluate the relevance of psychosocial factors in idiopathic headache. According to the criteria of the International Headache Society, 151 subjects had migraine and 94 had tension-type headache (TTH). Ninety-six subjects were headache-free controls. Psychosocial factors covered family and housing conditions, school problems, relations in the peer group, and several other items. We found that migraine patients did not differ from headache-free controls. Patients with TTH more often had divorced parents than the headache-free controls, and they had fewer peer relations than migraineurs and controls. In addition, migraine patients were significantly more often absent from school due to headache. All other psychosocial factors failed to discriminate between the three study groups.

Our results showed that age group 4-6 years had 38, 6-8 years had 32 and 8-10 years had 40 patients. Abu-Arefeh et al[17] assessed the prevalence rates of the various causes of severe headache in schoolchildren, with special emphasis on migraine and its impact on school attendance. The prevalence of migraine increased with age, with male preponderance in children under 12 and female preponderance thereafter.

Our results showed that type of headache was tension headache in 10, migraine in 46, migraine-like headache in 42, and non-specific headache in 12 patients. Treatment of migraine attacks should start as soon as possible after the onset of headache and before the onset of nausea and vomiting. For effective pain relief, analgesics should be given in optimum doses, which are 10–20mg/kg for paracetamol and 7.5–10mg/kg for ibuprofen.[18] Oral administration of medications is preferred by most children and parents but, if nausea and vomiting are early symptoms, oral medications are not effective. In such children, early treatment with an anti-emetic drug such as cyclizine or metoclopramide may offer relief of nausea and may improve response to pain killers. In other children, treatment with sumatriptan, as a nasal spray (10mg), may be a good alternative. Sumatriptan is licensed for children over the age of 12 years and has been shown to be effective in many but not all patients. Preventative treatment of migraine Preventative treatment of migraine is indicated if attacks occur on at least four occasions per month and are severe and long enough to stop activities.[19] There are no reliable medications to prevent headache in all children all of the time, but pizotifen, propranolol and topiramate may offer relief to some children and they are worth trying.

CONCLUSION

The most common type of headache was migraine. Maximum number of pediatric headache were seen in 8-10 years of age.

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