

## ORIGINAL ARTICLE

### Assessment of type of headache in children visited to Paediatric department- A clinical study

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#### ABSTRACT:

**Background:** Migraine is said to be the most common cause of primary headache in children. The present study was conducted to assess type of headache in children visited to pediatric department. **Materials & Methods:** 104 children age ranged 2 year to 10 years of both genders were diagnosed based on criteria proposed by International Headache Society. A thorough clinical examination and type of headache was noted. **Results:** Age group 2-4 years had 40, 4-6 years had 28, 6-8 years had 22 and 8-10 years had 14 patients. The difference was significant ( $P < 0.05$ ). Type of headache was migraine in 56, migraine-like headache in 34, tension headache in 10 and non-specific headache in 4 patients. The difference was significant ( $P < 0.05$ ). **Conclusion:** Maximum cases were seen in 2-4 years and most common type of headache was migraine.

**Key words:** Headache, Migraine, Children.

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#### INTRODUCTION

Migraine is said to be the most common cause of primary headache in children.<sup>1,2</sup> Migraine is categorised as primary headache disorder which is divided into "migraine without aura", a clinical syndrome characterised by a pulsating headache and associated symptoms of nausea, vomiting, photophobia, phonophobia as well as motion sensitivity and "migraine with aura", consisting of transient focal neurological symptoms, mostly visual or sensory, which precede or accompany the headache. Migraine can develop at all ages and affects 7.7 to 9.1% of children and adolescents.<sup>3</sup> Population based studies have identified a number of physical and emotional triggering factors, which can induce a migraine attack. Physical factors that can trigger migraine are age, comorbidities (i.e. atopic disorders, food intolerances and allergy, obesity, sleep disorders (sleep walking, sleep talking, nightmares, bruxism), caffeine consumption, skipping meals, alcohol consumption, immobility, weather, noise, menstruation and smoking.<sup>4</sup>

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."<sup>5</sup> A recent study of childhood migraine in an urban general practice showed minor differences in the prevalence of migraine according to the diagnostic criteria used. The rates were 3-7%, 4-2%, and 4 9% for International Headache Society, Ad Hoc Committee,"

and Vahlquist" criteria respectively.<sup>6</sup> The present study was conducted to assess type of headache in children visited to pediatric department.

#### MATERIALS & METHODS

The present study was conducted among 104 children age ranged 2 year 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 noted. Data thus collected were subjected to statistical analysis. P value  $< 0.05$  was considered significant.

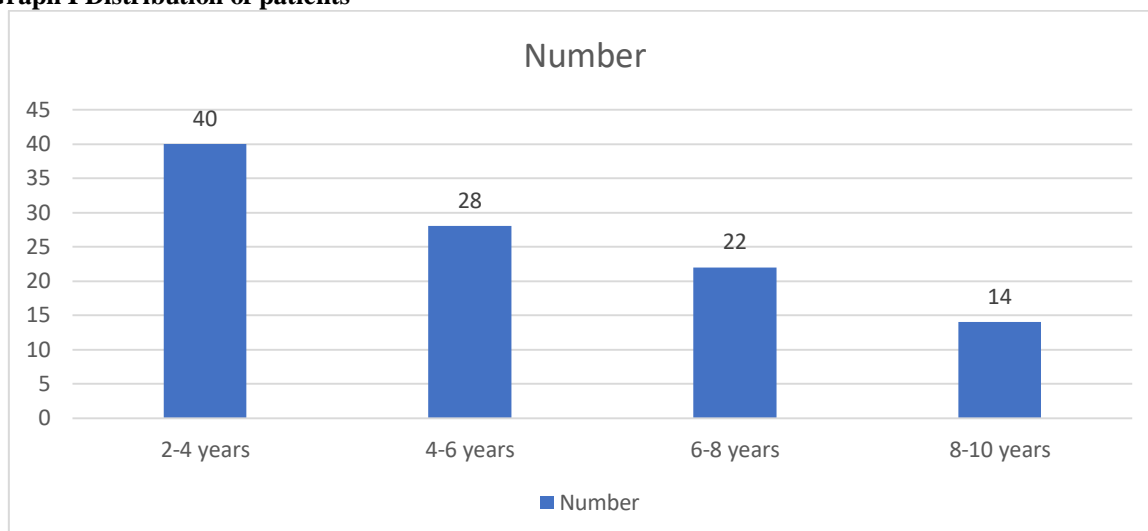
#### RESULTS

**Table I Distribution of patients**

Age group (Years)	Number	P value
2-4	40	0.05
4-6	28	
6-8	22	
8-10	14	

Table I, graph I shows that age group 2-4 years had 40, 4-6 years had 28, 6-8 years had 22 and 8-10 years had 14 patients. The difference was significant ( $P < 0.05$ ).

**Graph I Distribution of patients**

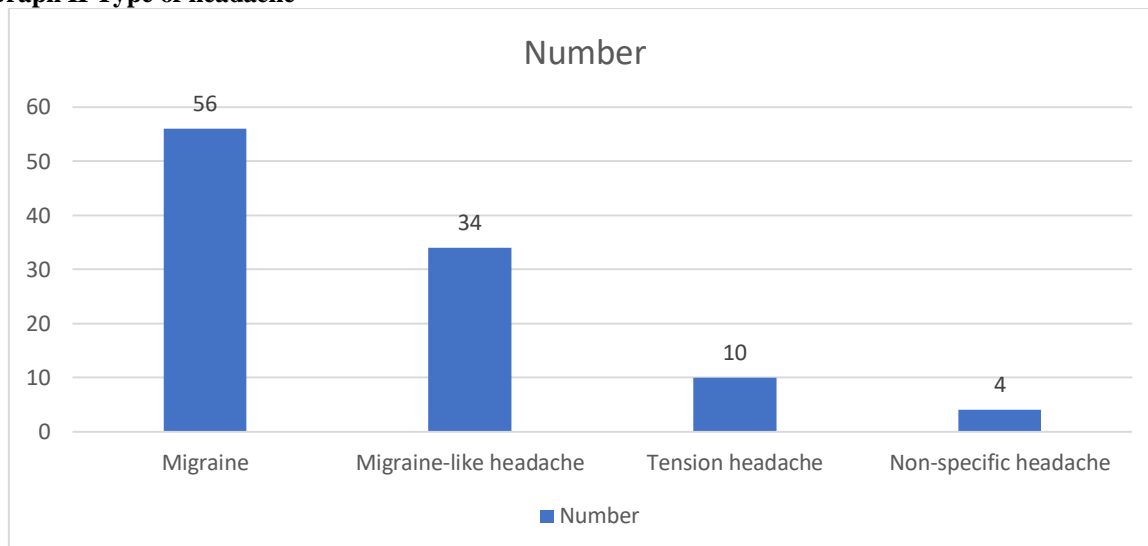


**Table II Type of headache**

Headache	Number	P value
Migraine	56	0.01
Migraine-like headache	34	
Tension headache	10	
Non-specific headache	4	

Table II, graph II shows that type of headache was migraine in 56, migraine-like headache in 34, tension headache in 10 and non-specific headache in 4 patients. The difference was significant ( $P < 0.05$ ).

**Graph II Type of headache**



**DISCUSSION**

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.<sup>7</sup> Migraine headaches are common, with a worldwide prevalence ranging between 8 and 18%.<sup>8</sup> Migraines cause significant disability, even during periods between attacks, and are responsible for \$1 billion in medical

costs and \$16 billion in lost productivity per year in the US alone.<sup>9</sup> The diagnostic criteria for migraine headaches have evolved over time. Currently, the International Headache Society (IHS) diagnostic criteria for migraine includes having at least 5 attacks that last 4–72 hours, that are unilateral, pulsating, moderate or severe in intensity and aggravated by or cause avoidance of routine physical activity and are also accompanied by nausea and/or vomiting, photophobia or phonophobia.<sup>10</sup> The present study was

conducted to assess type of headache in children visited to pediatric department.

In present study, age group 2-4 years had 40, 4-6 years had 28, 6-8 years had 22 and 8-10 years had 14 patients. Abu-Arefeh et al<sup>11</sup> determined the prevalence rates of the various causes of severe headache in schoolchildren, with special emphasis on migraine and its impact on school attendance. The estimated prevalence rates of migraine and tension headache were 10X60%o (95% confidence interval 9 1 to 12.3) and 0 9% /o (0\*5 to 1.5) respectively. The estimated prevalence rates for migraine without aura and migraine with aura were 7-80/ and 2-80/ (2-0 to 3.8) respectively. In addition, 10 children (0 70/6) had headaches which, though lasting less than two hours, also fulfilled the International Headache Society criteria for migraine, 14 (0 9% /) had tension headaches, and 20 (13% /) had non-specific recurrent headache. The prevalence of migraine increased with age, with male preponderance in children under 12 and female preponderance thereafter. Children with migraine lost a mean of 7-8 as compared with a mean of Hospital, Aberdeen 3-7 days lost by controls.

We found that type of headache was migraine in 56, migraine-like headache in 34, tension headache in 10 and non-specific headache in 4 patients. Wideroe et al<sup>12</sup> found that the mean headache frequency per month was reduced from 13.86 – 2.11 to 4.23 – 3.24 in group A, and from 13.23 – 2.43 to 5.83 – 4.04 in group B; the difference between the two groups was statistically significant ( $p < 0.01$ ). The mean headache duration per week was decreased from 9.9 – 7.4 hours to 3.2 – 5.9 hours in group A, and from 9.1 – 6.9 hours to 3.7 – 5.0 hours in group B; although there was no statistically significant difference between propranolol and sodium valproate, headache duration was markedly improved with each drug ( $p < 0.002$ ). Reduction of headache severity by at least one grade was seen in 64% of patients in group A and in 56% in group B, and complete cessation of headache attacks occurred in 14% of patients in group A and 10% in group B (not significant).

## CONCLUSION

Authors found that maximum cases were seen in 2-4 years and most common type of headache was migraine.

## REFERENCES

1. Diamond S, Medina JL. Double blind study of propranolol for migraine prophylaxis. *Headache* 1976; 16: 24-7.
2. Borgesen SE. Treatment of migraine with propranolol. *Postgrad Med J* 1976; 52 Suppl. 4: 163-5.
3. Klimek A. Use of propranolol in the treatment of migraine. *Neurol Neurochim Pol* 1975; 10: 12-5 27.
4. Nair KG. A pilot study of the value of propranolol in migraine. *J Postgrad Med* 1975; 21: 111-3.
5. Bicakci S. Comorbidity of migraine. *Noropsikiyatri Arsivi-Archives of Neuropsychiatry*. 2013;50(1):14–20.
6. Persson B. Growth environment and personality in adult migraineurs and their migraine-free siblings. *Headache*. 1997;37(3):159–68.
7. Tietjen GE, Brandes JL, Peterlin BL, Eloff A, Dafer RM, Stein MR, et al. Childhood maltreatment and migraine (part III). Association with comorbid pain conditions. *Headache*. 2010;50(1):42–51.
8. Due P, Holstein BE, Lynch J, Diderichsen F, Gabhain SN, Scheidt P, et al. Bullying and symptoms among school-aged children: international comparative cross sectional study in 28 countries. *Eur J Pub Health*. 2005;15(2):128–32.
9. Santinello M, Vieno A, De Vogli R. Primary headache in Italian early adolescents: the role of perceived teacher unfairness. *Headache*. 2009;49(3):366–74.
10. Karwautz A, Wober C, Lang T. Psychosocial factors in children and adolescents with migraine and tension-type headache: a controlled study and review of the literature. 1999;19:32–43.
11. Abu-Arefeh I, Russell G. Prevalence of headache and migraine in schoolchildren. *Bmj*. 1994 Sep 24;309(6957):765-9.
12. Wideroe TE, Vigander T. Propranolol in the treatment of migraine. *BMJ* 1974; 2: 699-701 29.
13. Taghdiri MM, Razavi Z. A comparison between the treatment and side effect of sodium valproate and propranolol in preventing migraine headaches. *Cephalalgia* 2008; 28 (4): 466 31.