



ORIGINAL RESEARCH PAPER

Paediatrics

CLINICAL PROFILE OF HEADACHE AMONG CHILDREN IN A TERTIARY CARE CENTRE

KEY WORDS: Headache, Migraine, Childhood Headache

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ABSTRACT

OBJECTIVE:To determine the clinical profile of headache in children.**SETTING:**Paediatric Neurology Department of Stanley Hospital.

DESIGN:Cross sectional study.

PARTICIPANTS:75 children between 5-12 years presenting to headache clinic.

PROCEDURE:Children presenting with headache were interviewed and examined and results documented.

RESULTS:Prevalence of headache increased with increasing age and is more common in females.Migraine without aura was common (72%).Among those with aura,visual aura was the most common (75%).School stress (13.3%) and sunlight(9.3%) were the most common precipitating factors. Headaches were usually relieved by sleep(32%) and analgesics(37%). Comorbidities were observed in 16% of children. 62% of children had a family history of migraine.40% of children reported missing school and 6.6% of children were hospitalized for headache.

CONCLUSION:Primary headache is the most common type observed in our study. Headaches were more common in the adolescent age group and in females.Headache was associated with significant disability in terms of school absenteeism and hospitalization.

INTRODUCTION:

Headache is a common complaint in children and adolescents. Headaches in children are frequently under recognized and under treated.It is estimated that worldwide about 60% of children and adolescents are prone to headache and migraine accounts for about 8%1. The prevalence is estimated to be 10–20% in the school-age population, increasing with age to around 27–32% at 13–14 years of age2. Primary headaches are unaccompanied by any structural, metabolic or any other lesion in the body in general and brain in particular, whereas secondary headaches are caused by exogenous disorders. Primary headaches are more common than secondary type in children and adolescents, with migraine and tension headaches accounting for majority of these. Migraine has been ranked one of the most debilitating diseases with a disability score of 0.7 by World Health Organisation (WHO).Migraine is found to be the sixth highest cause of years of life lost to disability. Headaches as a whole ranked third3.Headache has been associated with psychiatric and neurological comorbidity, particularly depression and anxiety, epilepsy, sleep disorders, ADHD. It also has been shown to have an association with atopy, cardiovascular disease, especially ischemic stroke and PFO.7School absenteeism and disturbance in social interaction are also reported.This study was undertaken to determine clinical profile and etiology of headache in children presenting to a tertiary care centre and associated comorbidities, if any.

METHODS:

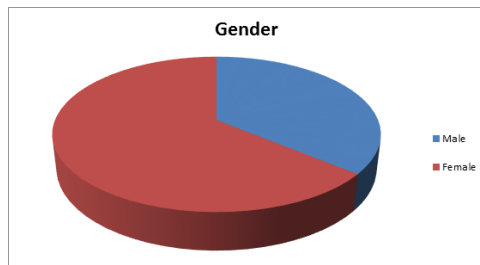
This is a cross sectional study conducted at the out patient department of Paediatric Neurology of Stanley Hospital between March-May 2018.Children of age 5-12 years attending the headache clinic were included in the study.Informed consent was obtained from parents. Children and parents were interviewed and results documented in a structured questionnaire.All children were evaluated completely with a systemic examination, blood pressure measurement and a detailed neurological examination

including ophthalmoscopy. They were referred to the consultant ophthalmologist and otorhinolaryngologist to exclude possible secondary causes of headache.Neuroimaging was done in selected cases where examination findings warranted.The findings were documented in the questionnaire and results analysed.

RESULTS:

Out of 75 children who participated in the study, 36% (n=27) were boys and 64%(n=48) were girls.Median age of presentation is 10 years(Range- 5-12 years). Prevalence of headache increased with increasing age, being more common in adolescence.Migraine without aura was the most frequent type(72%), followed by migraine with aura(14.7%) and tension type headache(2.7%).Visual aura was the most common type of aura reported(75%).Number of attacks varied from one per month(37.3%) to attacks almost everyday(1.3%).Frontal headache was observed in 44% of children followed in order by temporal(17.3%) and occipital headache(16%). Unilateral headache, the usual pattern observed in adults was seen in only 6 children(8%).Majority of the children(81.3%) reported headaches lasting from 1-2 hours(n=61, 81.3%).47 children(62%) had a first or second degree relative with migraine.Nausea, vomiting, lacrimation, phonophobia and photophobia were among the frequently reported symptoms associated with headache.School stress(13.3%) and sunlight(9.3%) were reported to be the most common precipitating factors independently and in combination with several other factors. Few comorbid conditions that were found in association with headache include snoring(n=3, 4%) , wheezing (n=3, 4%) and recent weight gain (n=3, 4%).5Analgesics were used to relieve the headache in 37.3% of children and sleep relieved the headache in 32%. 41children were on prophylactic drugs (54.6%).Propranolol was the most commonly prescribed drug either as monotherapy or in combination(49.3%), followed by sodium valproate(n=6, 8%) and Flunarizine.Amitriptyline was prescribed in 4 % of the cases.40% children reported missing school in the last one month and 6.6% required hospitalization.

FIGURE 1: Gender Distribution In The Study Group



Males: n=27 (36%)
 Females: n=48 (64%)

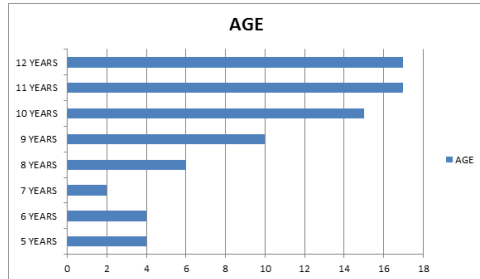


FIGURE 2: Age Distribution

Table1: Duration Of Headache

DURATION	NO.(%)
< 6 months	26(34.7%)
6 months-1 year	26(34.7%)
>1 year	23(30.7%)

Table 2: Site Of Headache

SITE	NO.(%)
Holocranial	09(12%)
Frontal	33(44%)
Occipital	12(16%)
Temporal	13(17%)
Unilateral	06(8%)
Nuchal	01(1%)
Periorbital	01(1%)

Table 3:precipitating Factors

FACTORS	NO.(%)
Stress	03(4%)
Sunlight	07(9.3%)
Head bath	02(2.7%)
Travel	02(2.7%)
School work	10(13.3%)
Skipping morning meal	01(1.3%)
Multiple precipitating factors	34(45.3%)
No factors	16(21.3%)

DISCUSSION:

Headaches are classified based on International Classification of Headache Disorders(ICHD-3 beta) into 1)Migraine 2)Tension type headaches 3)Trigeminal Autonomic Cephalalgias 4)Other primary headache disorders 5)Headache attributed to trauma 6)Headache attributed to cranial or cervical vascular disorder 7)Headache attributed to non vascular intracranial disorder 8)Headache attributed to substance or its withdrawal 9) Headache attributed to infection 10)Headache attributed to disorder of homeostasis 11)Headache or facial pain attributed to disorders of cranium, neck, eyes, ears, nose, sinuses, teeth, mouth or other facial or cervical structure 12)Headache attributed to psychiatric disorders 13)Painful cranial neuropathies and other facial pains.Children in the adolescent age group reported headaches more frequently and a greater proportion were females. This is supported by two other studies done by Mehta et al and Shivpuri et al.^{5,6} Higher prevalence in girls may be attributed to hormonal influences at puberty⁵.No case in our study had a secondary cause for headache. Migraine without aura was the most common form

reported(72%) followed by migraine with aura(10.7%) and tension headache (2.7%), similar to that reported by others^{1,6,7}.Visual aura was predominant pattern observed(12%), consistent with other reports⁸.Family history of headache was present in 37.3% of children.44% of children reported a frontal headache, followed in order by temporal(17%), occipital(16%) and holo cranial pattern(12%). School stress and sunlight were the most common precipitating factors for headache, either independently or in combination with other factors.This is consistent with other studies. Acute stress and intense emotions, lack of sleep are important triggers for most of the primary headache. Oversleeping was associated more with migraine with aura than in tension headache/ migraine without aura. Fatigue contributed more to tension headache than migraine⁹. Another study by Malik et al¹⁰ found stress to be the most common factor. Fasting and sleep deprivation follow. Headache was relieved by analgesics(37%), sleep(32%) or a combination of the two(21%). 16% of children had co existing conditions with headache- asthma, snoring and recent weight gain.40% of children reported missed school days and 6.7% of them were hospitalized in view of headache.

CONCLUSION:

Primary headache disorders are more common than secondary headache, with migraine without aura being the commonest type observed. Headache prevalence increases with increasing age and females are commonly affected. Stress in school was observed to be the most common precipitating factor for headache. Analgesics and sleep were the common relieving factors. Studies involving larger number of children is further warranted.

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