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## CAUSES OF RECURRENT/CHRONIC HEADACHE IN ADOLESCENTS PRESENTING IN OPD

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### ABSTRACT

**Introduction:** Headache is widely prevalent in adolescents. Migraine and tension headaches are supposed to be the commonest causes. Little work has been done in this space for the Indian adolescent child.

**Objective:** To study the causes of headache in adolescents presenting in the OPD.

**Materials and Method:** This study was conducted in the OPD of Tata Central Hospital, West Bokaro, Jharkhand. The children came from the town of West Bokaro and also from the adjoining suburbs. Headache registry was maintained from November, 2013.

Adolescents (10 to 16), (n: 155) with headache more than a month as the chief complaint were included. Children with features of overt URI, fever, H/O seizures were excluded from the study.

A working diagnosis was arrived at with history and physical examination. Refractory errors were checked for and ENT examination was done.

**Observation:** Tension headache was the commonest cause of headache (n: 57) followed by migraine (n: 39). Sinusitis, refractory errors and depression were other causes. There was a female preponderance in the group (F 115, M 40). In 29 cases, no clear diagnosis could be arrived at. Although these children were followed up for 12-24 months and 23 went for CT scan, not a single SOL was detected.

**Conclusion:** Tension headache and migraine are the common causes of chronic and recurrent headache in adolescents.

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### INTRODUCTION

**Introduction:** Headache, presenting as the primary symptom, is widely prevalent in adolescents. Migraine and tension headaches are supposed to be the commonest causes. Little work has been done in this space for the Indian adolescent child.

**Objectives:** To study the causes of primary recurrent/chronic headache in the adolescents presenting to the OPD.

**Materials and Method:** The study was conducted in the OPD of the Tata Central Hospital, West Bokaro, Jharkhand. It is a 60 bed secondary care hospital that gets about 15500 patients in the pediatrics OPD and about 475 patients as inpatients. The study was conducted on the adolescents (10-16 years) presenting to the pediatrics OPD with either recurring or chronic headache as the chief complaint. A headache registry was maintained from November 2013.

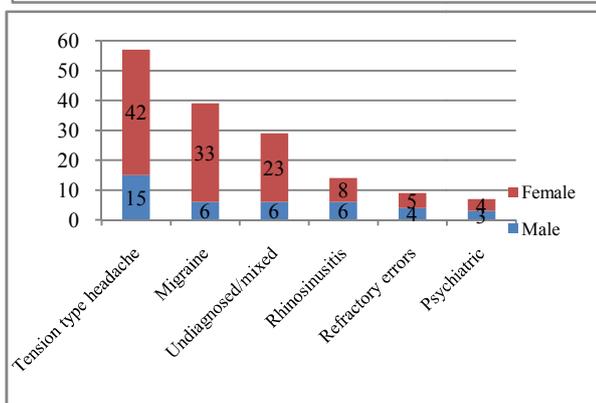
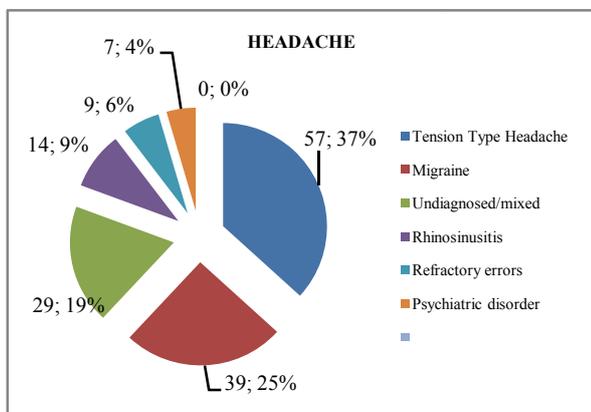
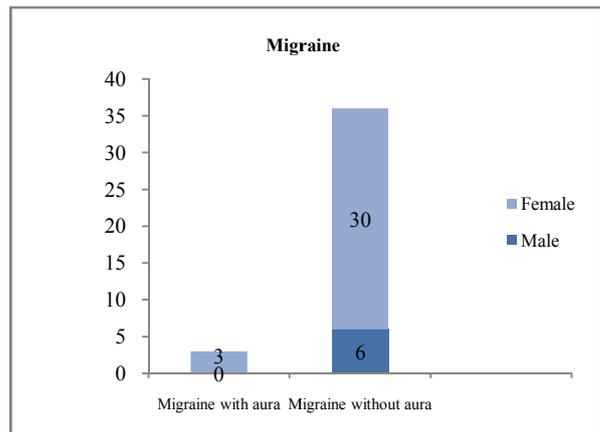
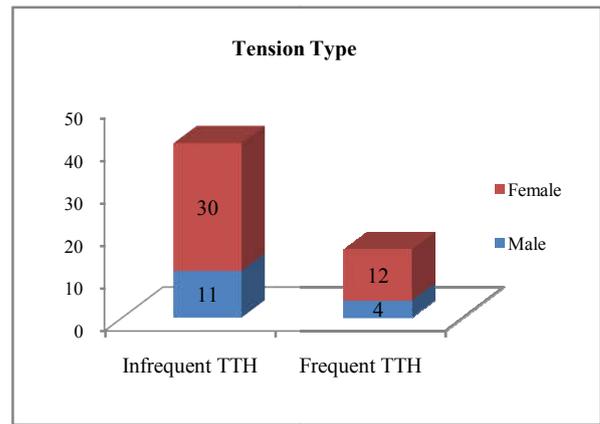
Any adolescent visiting the OPD for the first time were enrolled in the study except those who came under exclusion criteria. These children came from the town of West Bokaro, Jharkhand and also from the adjoining suburban and rural

areas. The children who had obvious acute respiratory infections, fever, other neurological symptoms or signs were excluded. Patients of epilepsy and those who were on antiepileptic drugs were also excluded. All the children underwent a follow up for a period of 1 year with fortnightly consultation. They underwent a progressive case record of history and examination, ophthalmologic, dental and ENT referral. Those children who did not fit to a diagnosis were further sent for a psychiatric evaluation and/or CT scan brain

**Observation:** 183 children were recruited over a period of two years, out of whom, 155 children completed the study. There was a female preponderance in the group (Male 40, Female 115). A diagnosis was reached by applying the IHS criteria(1) and a progressive case record on a structured history taking and examination.

<p><b>Migraine:</b></p> <ol style="list-style-type: none"> <li>1. At least 5 attacks</li> <li>2. Lasts for 4-72 hours untreated</li> <li>3. 2 of the 4: Unilateral/Pulsating/Moderate or severe intensity/aggravated by routine physical activity</li> <li>4. During headache 1 of the 2: Nausea or vomiting 2. Photophobia or phonophobia</li> </ol>
<p><b>Tension Type Headache:</b></p> <ol style="list-style-type: none"> <li>1. At least 10 episodes</li> <li>2. Lasting for 30 mins to 7 days.</li> <li>3. 2 of the 4: Bilateral/pressing or tightening type/mild to moderate/not aggravated by routine physical activity.</li> <li>4. No nausea, vomiting &amp; no photophobia, phonophobia or only one of the phobias</li> </ol>

All the children underwent test for refractory errors and ENT consultation and Dental Consultation. 53 children underwent CECT scan head. All were found to be normal scan. 29 children (M 6 F 23), even with psychiatric evaluation over and above all other investigations, were not found to fit to any pattern. Tension headache was found to be the commonest form of headache (N; 57, M 15, F 42). Out of tension headaches, majority were infrequent episodic tension type headache (M 11, F 30; N 41). Rest were Frequent episodic tension type headache (M 4, F 12; N 16) Migraine was diagnosed in 39 children (M 6, F 33). Only 3 children reported migraine with aura (M 0, F 3). Rest of the children had migraine or probable migraine without aura (M 6, F 30; N 36). 14 children had headache associated with rhinosinusitis (M 6, F 8). 9 children had refractory errors (M4, F 5). 7 children were diagnosed by Psychiatrists and Clinical Psychologists to have Psychiatric abnormalities, 3 (M 2 F 1) had school phobia and 4 (M 1 F 3) had somatization disorders.



## DISCUSSION

Headache is one of the most common disorders of childhood, with 75% children reporting a significant headache by the age of 15 years (2). Approximately 75% school going children experience infrequent headaches, while 10% children may have recurring headaches (3,4). Different studies found prevalence rates between 3 to 11% (5,6). Nearly all epidemiological studies on primary headache have highlighted this fact that migraine is the commonest cause of primary headache in adolescents (7,8,9,10). In our study, the Tension Type Headaches were found to be most frequent cause for primary headaches (N 57, 36.7%), followed by migraine (N 39, 25%).

Researchers have started collecting epidemiological data on tension type headaches in adolescents recently, and one study reported a prevalence of 12% among a population of 12 years old (11). The researchers concluded that it is as common as migraine. There are various risk factors associated with Tension Type headaches, e.g. Caffeine use, nicotine use, alcohol use, lack of exercise, stress in school and parental expectation (12). Chronic rhinosinusitis has also emerged in a significant proportion of cases (N 14, 9%), and refractory errors were found in 9 cases (5.8%). Psychogenic causes were responsible in 4.5% (N 7) cases. This delineates the importance of a multi-disciplinary approach in dealing with cases of primary headache. Both Tension Type Headaches and Migraine were found to be commoner in girls compared to boys, which has been the common finding across all studies.

We would also highlight the benefit of a regular follow up with a structured history taking along with a multidisciplinary approach that could effectively diagnose in a majority of cases (N 126, 81%).

The fact that CECT scan was of no use to add to the diagnosis and management of these children although 34.1 % (N 53) underwent CECT brain highlights the futility of CECT in the absence of any symptom and sign pointing to SOL.

## CONCLUSION

Tension Type Headaches and Migraine are the two most common causes of primary recurrent or chronic headache in adolescent children. Both these headaches are commoner in girls compared to that in boys. Rhinosinusitis, refractory errors and Psychiatric disorders are other causes of primary headache in adolescent children.

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