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TYPES OF CHILDHOOD ONSET HEADACHES IN PATIENTS REPORTING TO A NEUROLOGY CENTRE IN KARACHI (A DESCRIPTIVE STUDY)

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ABSTRACT

OBJECTIVE: *To evaluate the variety of childhood onset headaches in patients reporting to a private neurology centre in Pakistan.*
DESIGN: *Descriptive Study.*
PLACE AND DURATION OF STUDY: *Neuro Diagnostic Centre, Hamdard University Hospital (Taj Medical Complex), Karachi, from July 2007 to July 2009.*
PATIENTS AND METHODS: *100 headache patients were included in this study who reported to a Private Neurology Centre and complained of headaches between July 2007 to July 2009. Ages ranged between 1 and 49 years (age of onset ranged between 03 months and 13 years).*
RESULTS: *82 patients (82%) were diagnosed as migraine, 9 patients (9%) mixed headaches, 7 patients (7%) suffered tension headaches. Diagnosis was based on IHS criteria. 52% (52 patients) were male and 48% (48 patients) were female. Mean age of onset was 8.25 years male and 7.90 years female. The mean interval between age of onset and first neurology consult was 4.74 years. 54% (54 patients) of the patients were found to have familial headaches.*
CONCLUSION: *This was a 100 patient's study where migraine was the dominant headache followed by mixed, tension type and cluster headaches.*

KEYWORDS: Migraine, Mixed Headaches, Tension Headaches, Cluster Headaches, Childhood Headaches, Childhood Onset Headaches

INTRODUCTION

Headaches and migraines occur in a large proportion of children[1]. Up to 10 percent of 5-to-15-year-olds have been reported to have migraines, and up to 28 percent of girls between the ages of 15 and 19 appear to have migraines[1]. In addition, by the age of 5, 25 percent of children have had a notable headache, a proportion that increases to 75 percent by the age of 15[1]. Migraine headaches, which are the most frequent form of episodic headaches in children[1], makes up a large part of the study.

Headaches in children may be due to brain tumors or meningitis, but more commonly they are due to muscular tension or to vascular changes, such as is seen in migraine patients. To accurately differentiate between the possible etiologies, one must first perform a detailed evaluation of the onset and progression of the problem.

An accurate diagnosis of the cause of a child's headache is a task which is essential for obtaining appropriate and timely care. Younger children cannot always accurately describe their pain and so the assessment of available data is of great importance in establishing an accurate diagnosis.

PATIENTS AND METHODS

This is a descriptive study of 100 patients reporting to a private neurology centre in Karachi, Pakistan between July 2007 to July 2009.

The patients suffered from various types of headaches and the age ranged from 01 to 49 years (mean age 12.72 years)[2]. Age of onset of headache ranged from 03 months to 13 years and mean age of onset 8 years (graph I)[3]. Various parameters were studied which included gender, age, age on onset, family history, frequency, location, etc.

The diagnosis of individual headache type was made in strict conformity with the International Headache Society criteria. A structured questionnaire was designed which was answered by individual patients (if possible), parents and teachers (at times). All patients were interviewed by neurologists / neurology postgraduates of at least 3 years training. Migraine

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and TTH were diagnosed when criteria were fulfilled.

Patients with parents / teachers were told to answer the questions based on their most frequent type of headache, if they had more than one type. Therefore, we gave only one diagnosis for each subject with headache within the last year.

RESULTS

In this study, incidentally the headache population was dominated by males 52% and females 48%; however, individual headache types had a different outcome (table I). Of the total headaches, family history was found positive in fifty-four individuals out of which forty-eight were migraine (table II). After the patient's headache details were evaluated with the questionnaire together with the requisite investigations and the clinical assessment; the breakdown of various types of headaches was made. Eighty-two patients fell under the label of migraine; nine of the patients had more than one type of headache and were labelled as mixed headaches. Tension type headaches was found in seven of the patients, while the rare form of headaches called the cluster was confirmed only in two of the patients (see table I).

Of the phobias, the major chunk of the patients had a combination of phono and photo phobias, they formed 62% of the patient population. 15% had only phono phobia while the rest of the details have been jotted down in table III. Headaches were accompanied by nausea sixteen patients, nausea and vomiting thirty patients and vomiting alone in ten patients (table IV). Auras were reported in only three patients (table V).

The commonest location of headache was over the temples 37%, in the rest the headache was located either diffusedly or elsewhere (table VI). Imaging abnormality was positive in only three patients (table VII).

DISCUSSION

This is a descriptive study of 100 patients during the childhood period. The majority of children studied suffered from the disabling headache migraine[4]. Surprisingly only 54% of children had family history of headaches[5]. A very small proportion totalling 18 patients suffered from headaches other than migraine. Most of these either had mixed headaches, tension type headaches or cluster headaches. Migraine is a disabling headache and many a school days are lost[6]. The pattern of migraine in children is not much different from adults[7]; the duration may be a wee bit shorter.

GRAPH I.
AGE OF ONSET

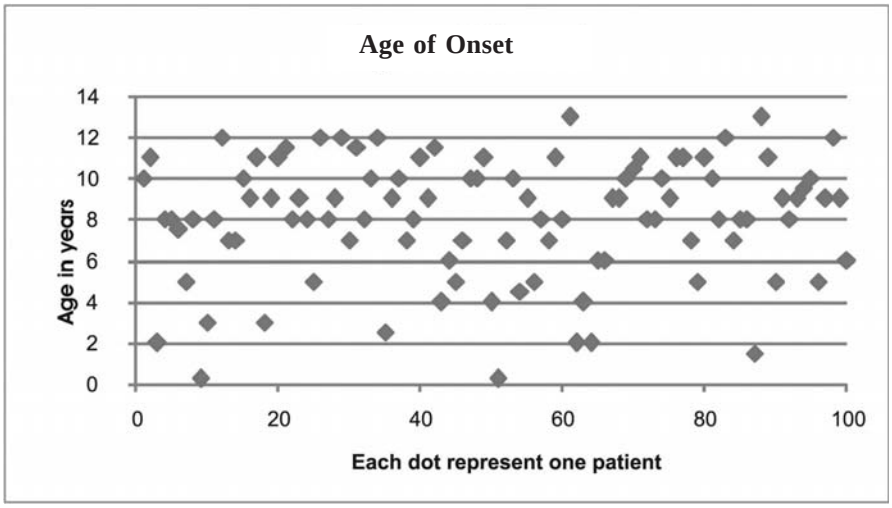


TABLE I.
TYPES OF HEADACHES & GENDER DISTRIBUTION

Type of Headache	No. of Cases	Percentage	Gender Male	Gender Female
Migraine[4]	82	82.00%	*41*	*41*
Mixed Headaches	9	09.00%	*5*	*4*
Tension Type Headaches	7	07.00%	*4*	*3*
Cluster Headaches	2	02.00%	*2*	*0*
Total	**100**	**100.00%**	***52***	***48***

TABLE II.
FAMILY HISTORY

	No. of Cases	Percentage	*Types of Headaches*	
Positive	54	54.00%	*Migraine*	*48*
			Mixed Headaches	*3*
			Tension Type Headaches	*3*
			Cluster Headaches	*0*
Negative	46	46.00%	*Migraine*	*34*
			Mixed Headaches	*6*
			Tension Type Headaches	*4*
			Cluster Headaches	*2*
Total	**100**	**100.00%**		***100***

TABLE III.
DISTRIBUTION OF PHOBIAS

Phobias	No. of Cases	Percentage
Phono & Photo	62	62.00%
Phono	15	15.00%
None	8	08.00%
Photo	7	07.00%
Phono, Photo, Osmophobia	5	05.00%
Phono, Osmophobia	1	01.00%
Phono, Photo, Claustophobia	1	01.00%
Photo, Osmophobia	1	01.00%
Total	**100**	**100.00%**

Very important aspect of this study was the age of onset, which went as low as three months. This is important because it is not always easy to diagnose or label such children in their infantile ages with migraine. The other thing is the history of migraine in the family; this is because in the infantile age, the history of migraine headaches in the family should support a vascular aetiology as was seen in the youngest of the migraine patients in the study. Children in their infantile age must be investigated during the episode so that the actual event can be recorded by the attending physician. The study also throws light on the fact that children in the infantile period cannot be labelled as migraine unless the event is recorded and studied. The other important message from this study is that though migraine is a post puberty disorder, it is not uncommon in infantile and small children.

Though tension type headache remains the leading cause of headache in the adulthood, migraine dominates the picture in infants and children[8]. The above study is highly supportive of this statement. It needs to be understood that though there may be a very strong family history of migraine, every patient with childhood headache and vomiting needs to be imaged[9]. Migraine often mimics more sinister headache aetiologies like intracranial tumours, tuberculous meningitis especially in this country[10].

A major outcome of this study is the prolonged period elapsing between onset of headaches and a proper neurological consult. In this delay, there is every likelihood of missing an occasional complicated migraine. If such headaches are not diagnosed by a neurologist or headache specialist, then complicated / hemiplegic migraine will be given drugs like ergotamine compounds which may further complicate migraine[11].

This study can be closely compared to a similar study published in Pediatrics International[12], which also shows that migraine is the dominant headache in children while other types follow.

Table IV.
Presentation of Nausea & Vomiting

	No. of Cases	Percentage
None	44	44.00%
Nausea, Vomiting	30	30.00%
Nausea	16	16.00%
Vomiting	10	10.00%
Total	**100**	**100.00%**

Table V:
Presentation of Auras

	No. of Cases	Percentage
Positive	03	03.00%
Negative	97	97.00%
Total	**100**	**100.00%**

TABLE VI:
LOCATION OF HEADACHE

Location	No. of Cases	Percentage
Temples	37	37.00%
Whole head	17	17.00%
Forehead	7	7.00%
Right Temple	5	5.00%
Nape of the Neck	4	4.00%
Temples, Nape of the Neck	4	4.00%
Right Side	3	3.00%
Temples, Eyes	3	3.00%
Temples, Forehead	3	3.00%
Temples, Crown of the head	2	2.00%
Whole head, Nape of the neck	2	2.00%
Both Temples Alternately	1	1.00%
Crown of the Head, Nape of the Neck	1	1.00%
Either Side, Eyes, Forehead	1	1.00%
Forehead, Right Temple	1	1.00%
Left Side	1	1.00%
Left Temple	1	1.00%
Left Temple, Crown of the head	1	1.00%
Orbit, Nape of the Neck, Upper Back	1	1.00%
Right Side, Forehead, Nape of the Neck	1	1.00%
Right Temple, Crown of the head, Neck	1	1.00%
Temples, Bilateral	1	1.00%
Temples, Crown of the Head, Forehead	1	1.00%
Temples, Eye balls	1	1.00%
Total	**100**	**100.00%**

Table VII:
Breakdown of Result of Neuroimaging

Type of Headache	No. of Cases	Percentage
Not Done	55	55.00%
Normal	42	42.00%
Abnormal	3	03.00%
Total	**100**	**100.00%**

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