

# A Clinical profile and Factors associated with Migraine in Pediatric patients

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## Abstract

**Introduction:** The epidemiology of pediatric headache is described in numerous articles of international origin. **Aims and Objectives:** To Study Clinical profile and Factors associated with Migraine in Pediatric patients. **Methodology:** This was a cross-sectional study carried out at the Pediatric department of a tertiary health care center during one-year period from January 2015 to December 2015. All the Pediatric patients were screened except less than 3 yrs. as it was expected that children below this age might not be able to express their symptoms clearly. Prensky's criteria for migraine was used to diagnose the Patients the patients associated with other reasons of headache like sinusitis, refractive errors, hypertension, chronic renal illness, neurological disorders and neoplasms were excluded from the study. All detail clinical and associated or precipitating factors history was asked. **Result:** The majority of the Patients were from age group of 3-6 i.e. 10.25% followed by 7-10-35.89%; 11-12 -53.84%. The majority of the patients were females i.e. 58.97% followed by Males 41.03%. The most common symptoms were Pulsating or throbbing headache which shifts to a unilateral or to temporal location were 53.84% followed by bi-temporal/bi-frontal/Retro-orbital headache in 46.15% patients; Nausea /Vomiting in 41.02% of patients; Photophobia in 35.89% patients; Abdominal Pain in 30.76% patients and Sweating in 25.64% patients; Visual Disturbances in 25.64% of patients. Giddiness (Vertigo) in 23.07% patients. Tingling sensation in hands or Perioral area were present in 12.82% of patients. The most common associated or Precipitating factors were Sunlight -64.10%; Mental stress- 53.84%; Physical strain -48.71%; Family history -46.15%. Watching TV -43.58%; Exposure to unpleasant smell -33.33%. Hunger -28.20%; Winter season -23.07%. **Conclusion:** Migraine was having late childhood onset; the majority of the patients were females Most common clinical features were Pulsating or throbbing headache which shifts to a unilateral or to temporal location, The most common associated or Precipitating factors were Sunlight, Mental Stress Physical strain etc. **Key words:** Migraine, Prensky's criteria, headache, Photophobia.

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## INTRODUCTION

The epidemiology of pediatric headache is described in numerous articles of international origin<sup>1-3</sup> with the conclusion that recurrent headache is the most prevalent pain problem in children. Prevalence estimates depend

largely on the definition of recurrence and various other factors like type of assessment instrument, source of data, which may vary considerably<sup>4</sup>. Relatively high prevalence's are described for tension-type headache, somewhat lower for migraine (18.5 % and 7.5 %, respectively)<sup>5</sup>. Although these numbers are occasionally interpreted as headache being a disastrous epidemic among youths, data on the impact of headache on children's wellbeing and the degree of disability are rare<sup>7, 8</sup>. Data from these studies show that many children and adolescents are affected by headache, but only a few are severely disabled (4 %–5 % of sufferers). Girls, especially from the age of 11 years on, are more frequently affected by headache than boys. A close relationship of this gender difference with the occurrence of the first menarche is often discussed; however, without consistent empirical support<sup>9</sup>.

Manifestations of migraine may vary according to patient age, as follows: Infants may present with only episodic “head banging”, Preschool children often have episodes involving an ill appearance, abdominal pain, vomiting, and the need to go to sleep; they may exhibit pain by irritability, crying, rocking, or seeking a dark room in which to sleep, Children aged 5-10 years typically have bifrontal, bitemporal, or retro-orbital headache; nausea; abdominal cramping; vomiting; photophobia; phonophobia; a need to sleep; migraine facies; tearing, swollen nasal passages; thirst; edema; excessive sweating; increased urination; or diarrhea. Older children may experience increasing headache intensity and duration; a pulsating or throbbing character to the headache; and a shift to a unilateral, temporal location <sup>10</sup>

**METHODOLOGY**

This was a cross-sectional study carried out at the Pediatric department of a tertiary health care center during one-year period from January 2015 to December 2015. All the Pediatric patients were screened except less than 3 yrs. as it was expected that children below this age might not be able to express their symptoms clearly. Prensky's<sup>5,11</sup> criteria for migraine was used to diagnose

the Patients the patients associated with other reasons of headache like sinusitis, refractive errors, hypertension, chronic renal illness, neurological disorders and neoplasms were excluded from the study. All detail clinical and associated or precipitating factors history was asked.

**RESULT**

**Table 1: Age wise distribution of the Patients**

Age (Yrs.)	No.	Percentage (%)
3-6	4	10.25%
7-10	14	35.89%
11-12	21	53.84%
<b>Total</b>	<b>39</b>	<b>100.00%</b>

The majority of the Patients were from age group of 3-6 i.e. 10.25% followed by 7-10-35.89%; 11-12 -53.84%.

**Table 2: Gender wise distribution of the patients**

Sex	No.	Percentage (%)
Female	23	58.97%
Male	16	41.03%
<b>Total</b>	<b>39</b>	<b>100.00%</b>

The majority of the patients were females i.e. 58.97% followed by Males 41.03%.

**Table 3: Distribution of the patient as per the symptom wise**

Clinical Features*	No.	Percentage (%)
Pulsating or throbbing headache; and a shifts to a unilateral, temporal location	21	53.84%
Bi-temporal/Bi-frontal/Retro-orbital headache	18	46.15%
Nausea /Vomiting	16	41.02%
Photophobia	14	35.89%
Abdominal Pain	12	30.76%
Sweating	10	25.64%
Visual Disturbances	10	25.64%
Giddiness (Vertigo)	9	23.07%
Tingling sensation in hands or Perioral area	5	12.82%

(\*Patients were having more than one symptoms)

The most common symptoms were Pulsating or throbbing headache which shifts to a unilateral or to temporal location were 53.84% followed by bi-temporal/bi-frontal/Retro-orbital headache in 46.15% patients; Nausea /Vomiting in 41.02% of patients; Photophobia in 35.89% patients; Abdominal Pain in 30.76% patients and Sweating in 25.64% patients; Visual Disturbances in 25.64% of patients.Giddiness (Vertigo) in 23.07% patients. Tingling sensation in hands or Perioral area were present in 12.82% of patients.

**Table 4: Distributions of the patients as per the associated /precipitating factors**

Associated / Precipitating factors	No. (n=39)	Percentage (%)
Sunlight	25	64.10%
Mental stress	21	53.84%
Physical strain	19	48.71%
Family history	18	46.15%
Watching TV	17	43.58%
Exposure to unpleasant smell	13	33.33%
Hunger	11	28.20%
Winter season	9	23.07%

(\*Patients were having more than one associated /precipitating factors)

The most common associated or Precipitating factors were Sunlight -64.10%; Mental stress- 53.84%; Physical strain - 48.71%; Family history -46.15%. Watching TV -43.58%; Exposure to unpleasant smell -33.33%. Hunger -28.20%; Winter season -23.07%.

## DISCUSSION

Migraine is the 3<sup>rd</sup> most prevalent illness in the world. Amazingly, 12% of the population – including children – suffers from migraine. 18% of American women, 6% of men, and 10% of children experience migraines. Migraine is most common between the ages of 25 and 55. Migraine tends to run in families. About 80% of migraine sufferers have a family history of migraine.<sup>12</sup>

In our study we have found that The majority of the Patients were from age group of 3-6 i.e. 10.25% followed by 7-10-35.89%; 11-12 -53.84%. The reason of the late child hood onset could because may be associated with menarche in females and mental stress is increased in the form of studies or other form so these factors could be related. These findings are confirmatory with N. Thilothammal *et al.*<sup>11</sup> The majority of the patients were females i.e. 58.97% followed by Males 41.03%. this is confirmatory with Gassmann *et al.* 2012<sup>13</sup> the reasons could be ; In girls the factors of the behavioral and emotional domain significant associated with of headache and migraine and also the migraine is associated with the menarche and hence may be more common in girls. In our study the most common symptoms were Pulsating or throbbing headache which shifts to a unilateral or to temporal location were 53.84% followed by bi-temporal/bi-frontal/Retro-orbital headache in 46.15% patients; Nausea /Vomiting in 41.02% of patients; Photophobia in 35.89% patients; Abdominal Pain in 30.76% patients and Sweating in 25.64% patients; Visual Disturbances in 25.64% of patients. Giddiness (Vertigo) in 23.07% patients. Tingling sensation in hands or Perioral area were present in 12.82% of patients. The most common associated or Precipitating factors were Sunlight -64.10% as the most of the time symptoms were having onset with sunrise and relived in with sunset in night and hence sunlight was one of the precipitating factor; Mental stress was 53.84% the mental stress to children was in the form of studies, competitive drive etc.; Physical strain -48.71% these were exercise or playing with classmates; Family history -46.15%. Watching TV -43.58% this could be related to photophobia; Exposure to unpleasant smell--33.33% like scent of Agarbattis, Perfumes or any unpleasant smell specific to the patient. Hunger precipitated the attacks in 28.20%; In some patients it was observed a seasonal like in most of the patients it was aggravated in Winter season -23.07%. These findings are similar with<sup>14,15,16</sup>

## CONCLUSION

Migraine was having late childhood onset; the majority of the patients were females were Pulsating or throbbing headache which shifts to a unilateral or to temporal

location. The most common associated or Precipitating factors were Sunlight, Mental Stress Physical strain etc.

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