



Chronic Daily Headache & its subtypes distribution according to age & sex

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Abstract

Background: Chronic daily headache is not a specific headache type, but a syndrome that includes various primary and secondary headaches. It affects approximately 3-5% of the population. Females are affected 2 to 3 times more often than man. The present study is of Chronic Daily Headache & it's subtypes distribution according to age & sex.

Material & Methods: This cross sectional study was done in Out Patient Department (OPD) of Mahatma Gandhi Hospital attached to Mahatma Gandhi Medical University, Jaipur located in North India providing secondary/tertiary medical care. Consecutive patients with chronic daily headache (CDH) attending the neurology and medicine Out Patient Department between September 2016 to September 2017 were enrolled for the study.

Results: The present study showed that the maximum number of the patients (65%) were seen in the age group of 21-40 years and mean age of CDH patients was 34.21 ± 11.82 years. It is seen that out of 200 patients, 120(60%) patients had Chronic Migraine (CM), 80 (40%) patients had Chronic Tension Type Headache (CTTH), 78 patients had Medication Overuse Headache and no one had Hemicrania Continua or New Daily Persistent Headache. Mean age of CM patients was lower (32.23 ± 11.49) as compared to mean age of CTTH patients (37.16 ± 11.76), this difference was statistically significant ($P=0.0036^{**}$). Sex wise distribution of the cases, female was 153 (76.5%) and 47 (23.5) were males.

Conclusion: Chronic daily headache frequency & its sub type CM & CTTH are higher in females as compared to males. In females, CM is more common than CTTH & in males, CTTH is more common than CM. CTTH affects at a higher age as compared to CM. Female to male ratio is higher in CM (5.3:1) as compared to CTTH (1.9:1).

Keywords: Chronic Daily Headache, Chronic Migraine, Chronic Tension Type Headache, New Daily Persistent Headache.

Introduction

Chronic daily headache is not a specific headache type but Chronic daily headache (CDH) is a broad term which includes groups of headache disorders

and it is not a diagnosis. "The term chronic daily headache is applied when the headache frequency is ≥ 15 days a month for ≥ 3 months".⁽¹⁾

Chronic daily headache includes various primary and secondary headaches. Here chronic means either frequency of headache or duration of headache depending on specific headache type.

In several studies, they found difficulty in classifying frequent primary headaches using IHS criteria. Due to this fact Silberstein SD et al proposed new classification criteria for chronic daily headache in 1996.⁽¹⁾ Under the general term of chronic daily headache, “Silberstein classified these daily or near daily headaches mainly into transformed migraine (TM), new daily persistent headache, chronic tension type headache, and hemicrania continua”. Later on Chronic migraine replaced the term transformed migraine. Chronic daily headache mostly transforms from episodic headache through a gradual progression over months to years. It affects approximately 3-5% of the population.⁽²⁻⁴⁾ Females are affected 2 to 3 times more often than man.

Chronic migraine is one of the most common headache syndromes encountered at the major tertiary care centers. A precipitating factor is associated most of the time. It is also many times associated with medical conditions. It is also precipitated by physical or environmental factors like bright light/ visual stimuli, hypersensitivity reactions like allergy, urticaria, and drug hypersensitivity, risk factors like obesity, medication overuse, snoring, fasting, sleep deprivation, smoking, menstruation, odors, weather changes, dietary factors, psychiatric comorbidity & stress.⁽⁵⁾ The present study is of chronic daily Headache & it's subtypes distribution according to age & sex.

Material & Methods

This cross sectional study was done in outpatient department (OPD) of Mahatma Gandhi Hospital attached to Mahatma Gandhi Medical University, Jaipur located in North India providing secondary/tertiary medical care. The study was approved by the Institutional Ethics Committee.

Patient's sample

Consecutive patients with chronic daily headache (CDH) attending the neurology and medicine Out Patient Department between September 2016 to September 2017 were enrolled for the study. The inclusion and exclusion criteria for the subjects in the study groups as given below.

Inclusion Criteria

1. Age \geq 18 years and \leq 65 years

Exclusion Criteria

1. Age < 18 years
2. Patients who have intracranial space occupying lesion
3. Patients with a concomitant medical illness such as end-stage organ failures e.g. renal, cardiac, hepatic, respiratory, secondary causes of CDH

Diagnosis of chronic daily headache and its subtypes

We are doing the epidemiological study so it is necessary to know the definition of diagnosis to define who is suffering from disease and who is not. Chronic daily headache includes various primary and secondary headaches and it is characterized by very frequent headache each around for \geq 4 hours (\geq 15 days a month for at least 3 months)

The classification of CDH as a form of headache is based upon criteria given by Silberstein and Lipton (the SL criteria)⁽¹⁾ and according to prevalence we include only 5 frequent subtypes of frequent headache and we consider definition according to ICHD-3 beta classification criteria. As we are studying only 5 frequent subtypes.

- Chronic migraine headache
- Chronic tension-type headache
- Medication overuse headache
- Hemicrania Continua
- New daily persistent headache

So here chronic daily headache is characterized by very frequent headache each around for 4 hours (\geq 15 days a month) including headache associated with medication overuse. And we will define each

headache types according to diagnostic criteria of ICHD-3 beta classification.

So to identify the type of headache we asked about duration of headache, duration of each headache attack, frequency of headache per month, associated symptoms, functional disability, analgesic use and response to treatment.

Results

The present study showed that the maximum number of the patients (65%) were seen in the age group of 21-40 years and mean age of CDH patients was 34.21±11.82 years (table 1).

Table 1: Chronic Daily Headache (CDH) distribution according to Age

Age Group (Years)	CDH	Percentage
18-20	20	10%
21-30	78	39%
31-40	52	26%
41-50	26	13%
51-60	24	12%
61-65	0	0%
Mean age ±SD	34.21±11.82	

Chronic Daily Headache is more common in female as compared to male. In both male and female highest number of patients were found in the same age group of 21-30 years. Mean age of male was 35.23±13.89 years & in females was 33.89±11.14 years, but statistically not significant (p-value= 0.4963) (Table 2).

Table 2: Chronic Daily Headache (CDH) distribution according to age and sex

Age Group	Male	Female	Total
<21	3	17	20
21-30	23	55	78
31-40	5	47	52
41-50	8	18	26
51-60	8	16	24
>60	0	0	0
TOTAL	47	153	200
Mean age ±SD	35.23±13.89	33.89±11.14	P=0.4963

It is seen that out of 200 patients, 120(60%) patients had Chronic Migraine (CM), 80 (40%) patients had Chronic Tension Type Headache (CTTH), 78 patients had Medication Overuse Headache and no one had Hemicrania Continua or New Daily Persistent Headache. All 78 patients with Medication overuse Headache had either

Chronic Migraine or Chronic Tension Type Headache (table 3).

Table 3: Chronic Daily Headache according to its subtypes

Subtypes	Numbers
Chronic Migraine	120
Chronic Tension Type Headache (CTTH)	80
New Daily Persistent Headache	0
Medication Overuse Headache	78
Hemicrania Continua	0

Mean age of CM patients was lower (32.23±11.49) as compared to mean age of CTTH patients (37.16±11.76), this difference was statistically significant (P=0.0036**) (table 4).

Table 4: Chronic Migraine (CM) and Chronic Tension Type Headache (CTTH) distribution according to age

Age Group (Yrs)	CM	CTTH	Total
<21	17	3	20
21-30	44	34	78
31-40	34	18	52
41-50	12	14	26
51-60	13	11	24
>60	0	0	0
TOTAL	120 (60%)	80 (40%)	200
Mean age ±SD	32.23±11.49	37.16±11.76	P=0.0036**

In our study showed that the among female CM was more common than CTTH (F:M was 5.3:1) and among male CTTH was more common than CM (F:M was 1.9:1) (table 5).

Table 5: Chronic Migraine (CM) and Chronic Tension Type Headache (CTTH) distribution according to sex

Gender	CDH	CM	CTTH
Female	153	101	52
Male	47	19	28
Female: Male	3.25:1	5.3:1	1.9:1

Discussion

In this study, 200 patients of CDH ≥18 years to ≤65 year age group were studied. The maximum number of cases were found in 21-30 and 31-40 year age group 78 (39%) and 52 (26%) cases respectively. No cases were found in 61-65 year age group (0% cases). The mean age of patients who fulfilled CDH criteria was 34.21±11.82 years. Sex wise distribution of the cases, female was 153 (76.5%) and 47 (23.5) were males. Ratio

being was 3.3:1 female: male. The mean age of female CDH subjects (33.89 ± 11.14) was lower than male CDH subjects (35.23 ± 13.89), but it was statistically insignificant (P -value=0.4963). In this study mean age was lower compared to western studies may be because of the ignorant behavior of older people towards headache in India.

Castillo J et al in 1998 found the highest number of cases in 41 to 55 years age group and lowest in 65 year age group and female to male ratio was 8.7:1.⁽⁶⁾ In another study conducted by Lu SR et al in 2001³ on 108 patients of CDH, the mean age was 39 ± 15 years (range 15-78 years). Mean age of CM was 37 ± 14 years. Mean age of CTTH was 42 ± 15 years and female to male ratio was 2.6:1.

Queiroz LP et al (2008) found that the highest number of cases in 30-39 year age group and female to male ratio was 2.4:1.⁽⁷⁾

In the current study chronic daily headache subtypes were studied. Chronic migraine was the most common CDH subtype ($n=120$) which was seen in 60% of all CDH subjects. 80 subjects met the CTTH criteria, which were 40 % of all CDH subjects. 78 subjects also fulfilled MOH criteria, out of which 58 were CM subjects and 20 were CTTH subjects. 78 subjects had MOH either associated with CM or CTTH. No subject of another type of CDH were found in this study. The mean age of patients with CM was (32.23 ± 11.49 years) and with CTTH was (37.16 ± 11.76 years), P -value < 0.0036 . The mean age of CM was significantly lower than that of CTTH. This suggests CTTH affects at higher age compared to CM. Similar results were found in western studies.^{3,6} Out of 153 female CDH subjects, 101 had CM & 52 had CTTH. Out of 47 male CDH subjects, 28 had CTTH & 19 had CM. So higher female to male ratio was noted in CM (5.3:1) as compared to that of CTTH (1.9:1). This also suggests CM is more common in Females compared to CTTH & in males CTTH is more common than CM.

In the study conducted by Pascual et al⁸ in 2001 on 89 subjects of CDH 42 had CTTH, 45 had CM & 2 had NDPH. Mean age of CM was 47 ± 14

years & CTTH 52 ± 18 years, p value 0.035, & out of 42 subjects of CTTH 38 (90.55%) were female & 4 were male (9.45%). Out of 45 subjects of CTTH 40(88.9%) were female.⁽⁸⁾

In another study conducted by Juang et al on 108 patients. Out of 108 CDH subjects 59 had CM, 47 had CTTH & 2 subjects classified as "other CDH". Mean age of CM was 37 ± 14 years & CTTH 42 ± 15 years. out of 59 subjects of CM, 50 were female & 9 were male. Out of 47 subjects of CTTH, 28 were female & 19 were male.⁽⁹⁾

Conclusion

Chronic daily headache frequency & its subtype CM & CTTH are higher in females as compared to males. In females, CM is more common than CTTH & in males, CTTH is more common than CM. CTTH affects at a higher age as compared to CM. Female to male ratio is higher in CM (5.3:1) as compared to CTTH (1.9:1).

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