

Importance and Implications of Sub-Categorization of Chronic Headache and the Incidence in General Medical OPD of a Teaching Hospital

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ABSTRACT

Objective: This study was designed to assess the incidence of chronic headache and its sub-varieties in our local patients, to highlight the importance of exact diagnosis in proper categories and to sensitize both general population and the medical community to recognize its importance for early diagnosis and interventions.

Study Design: Observational cross section study

Place and Duration of Study: This study was conducted at the Department of Medicine, Rai Medical College Teaching Hospital, Sargodha from January to September, 2022.

Materials and Methods: Medical OPD, 13-75 years, both gender with complain of primary headache for more than 3 months. After ensuring the presence of chronic primary headache based on the standard parameters, participating physicians secured informed consent and applied inclusion/exclusion criteria and evaluated them to assign to Migraine, TTH or CH subtype.

Results: After fulfilling inclusion and exclusion criteria 200 patients were enrolled for this study with 63 (31.5%) Male and 137(68.5%) females. 9.5% (n19) were adolescent (13-18), 83.5% (n 167) were adults (18-59 and 7% were in late adults years (above 60). 60 patients (30%) were unmarried and 140 patients (70%) were married. When analyzed 102 (51%) were assigned to Migraine, 79 (39.5%) were assigned to TTH and 19 (9.5%) were assigned CH diagnosis. 45% of our patients presented early within 6 months, 25% presented within 6-12 months, 20% presented with 1-5 years history and only 9% had a history longer than 5 years.

Conclusion: Headache especially chronic is most likely to present in primary care setting. Disability index and severity index didn't show any typical pattern, TTH turned out to be more disabling. It is concluded that exact diagnosis into the subtypes has important therapeutic implications. Predisposing/ precipitating and/or perpetuating factors have important implication in the management for specific subgroups. Addressing modifiable factors like adequate hydration, menstrual regularity, sleep hygiene, alcohol and substance abuse, excessive caffeine and/or lack of exercise needs attention tailored to each subtype. TTH benefits most from anxiolytics and antidepressants. Prophylaxis medicine along with diet, mood and sleep improvement has important role in Migraine. The non-responders needs a revisit to the diagnosis, noncompliance or overuse. Medication overuse headache must be watched for after regular medication.

Key Words: Primary Headache, Migraine, Tension Type Headache, Cluster Headache

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INTRODUCTION

WHO ranks Headache (according to beta version (ICHD-3 β) criteria)¹ amongst the top 10 disabling

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conditions, with 46% prevalence and lifetime prevalence of 90% in adults but ironically is left un-addressed in spite of significant burden of ill health and disability. Migraine, TTH and CH are the commonest varieties. There is large gray area of overlapping symptoms which makes it very difficult to assign exact diagnosis.²

Migraine (ICHD-2 criteria) is a multifactorial bio-behavioral disorder with a complex interaction with diet and sleep. (3) TTH (42%) is considered to be the second most prevalent disorder with its heavy socio-economic impact.^{4,5} CH is characterized by recurrent, severe one sided pain and autonomic symptoms in trigeminal nerve distribution with a negative impact on quality of life ranging from restricted daily activities

and limiting household work, family, job and social activities. It has high tendency to effect young men with significant impact on job. To complicate the matter further more than half attribute it wrongly to migraine.⁶ Medication overuse headache is newly emerging concept in all these cases and needs to be addressed.⁷ It's imperative to exclude secondary or coexisting pathologies which are present in approximately 10% of cases by focused history and neurological examination. Local causes like toothache, sinus, eye, ear or neck and neuralgias are easy to exclude.⁸

The phenotype can be used for segregation of primary headache, attack frequency, duration, concomitant symptoms and cranial autonomic symptoms are the main factors. The third edition of the International Classification of Headache Disorders (ICHD-3)¹ has issued following guidelines. Headache may be categorized as episodic (< 5 days/month), chronic (\geq 15 days/month) or daily. TTH may last from 30 minutes to seven days, a migraine headache usually lasts 4–72 hours, and a cluster headache typically lasts 15–180 minutes. TTH predominantly affecting females, is usually of mild to moderate intensity, bilateral with pressing quality and typically not aggravated by physical activity. Typical migraine with visual or sensory aura (1/3 cases), family history, is typically unilateral, pulsatile or throbbing, of moderate to severe intensity, sensitive to movement and may exhibit photophobia, nausea and vomiting. Cluster headache patients experience one of the severest pain thereby known as 'suicide headache'.⁹

MATERIALS AND METHODS

We invited all the patients presenting to Medical OPD with complain of headache for more than 3 months to volunteer for the study. After ensuring the presence of primary chronic headache based on the standard parameters, participating physicians secured informed consent and applied inclusion/exclusion criteria and evaluated them to assign to Migraine, TTH or Cluster headache subtype.

Inclusion Criteria: 13-75 years age, both genders, primary headache for more than 3 months.

Exclusion Criteria: Chronic heavy smokers,

alcoholics, substance addicts, major end-organ disease, shift workers, endocrine disorders, pregnancy and lactation, using major antipsychotic medication or patients with neurological disorders were excluded from this study.¹⁰

Sample size and sampling technique: Convenient sampling was adopted. A minimum sample size of 185 patients was calculated to maintain a 5 percent margin of error, a 95 percent confidence interval and a 75 percent response distribution, using a raosoft sample size calculator.

Statistical Analysis: Data analysis was conducted using Microsoft Excel version 2016 and Statistical Package for Social Sciences (SPSS) software version 25. Descriptive statistics (i.e. frequency distribution, percentages, mean and standard deviations) were the primary analytical methods.

RESULTS

After fulfilling inclusion and exclusion criteria 200 patients were enrolled for this study with 63 (31.5%) Male and 137(68.5%) Females. 9.5% (n19) were adolescent (13-18), 83.5% (n 167) were adults (18-59 and 7% were in late adults years (above 60). 60 patients (30%) were unmarried and 140 patients (70%) were married. When analyzed by the psychiatrists, 102 (51%) were assigned to Migraine, 79 (39.5%) were assigned to TTH and 19 (9.5%) were assigned CH diagnosis. 45% of our patients presented early within 6 months, 25% presented within 6-12 months, 20% presented with 1-5 years history and only 9% had a history longer than 5 years.

Table No.1: Duration of Headache in each Subtype.

Duration/Type	Migraine	TTH	CH	%
3-6 months n90	n46	n40	n4	45%
6-12 months n51	n27	n16	n8	25.5%
1-5 years n41	n21	n14	n6	20.5%
5 or more years n18	n8	n9	n1	9%

Majority of the patients presented early for evaluation.

Table No.2: Headache Subtype and degree of disability

Type/ Disability Score	Mild Disability	Moderate Disability	Severe Disability	Complete Disability
Migraine (n102)	n29 (28.4%)	n34 (33.3%)	n31 (30.4%)	N8 (7.8%)
Tension Type Headache (n79)	n10 (12.7%)	n34 (43%)	n28 (35.4%)	N7 (8.9%)
Cluster Headache (n19)	n3 (15.8%)	n8 (42.1%)	n6 (31.6%)	n2 (10.5%)

TTH caused maxim disability.

DISCUSSION

Headache especially chronic is most likely to present in primary care. It has important implications on

employment, relationships, both personal and job, and activities with significant psychosocial and financial burden.¹¹ Gupta et al reported 14.8% prevalence of migraine while Naila et al. reported 40% incidence of migraine with depression in Karachi. Mohammad Ilyas

Jat reported 37.16% prevalence of common primary headache prevalence in depressed persons.^{2,12} When we analyzed our patients, 102 (51%) were assigned to Migraine, 79 (39.5%) were assigned to TTH and 19 (9.5%) were assigned CH diagnosis. This seems too high but can be explained that we studied the headache population whereas Gupta, Naila and Ilyas has reported incidence in general population. Majority of our patients reported early for proper evaluation, 45% of our patients presented early within 6 months, 25% presented within 6-12 months, 20% presented with 1-5 years history and only 9% had a history longer than 5 years. This represents a clear indication that proper diagnosis is either not sought or not given to the patients. This is exactly what we are trying to highlight in this study that proper diagnosis and sub-categorization is imperative for proper treatment. Severity of pain is a perception highly dependent on psychological state of the mind, TTH patients scored relatively higher, 43% moderate and 35% severe, on severity and disability score. CH is considered to be one of the severest headache, unexpectedly we had only 31% in severe and 10% in complete disability group. The SNOOP4 mnemonic is very useful eliciting the red flags necessitate further evaluation by specialties and/or emergency management is depicted as [S: Systemic symptoms: fever, chills, myalgia, weight loss Metastasis, infection. N: Neurological symptoms or deficits, stroke, mass lesion, encephalitis. O: Older age at onset (> 50 years), temporal arteritis, glaucoma, mass lesion. O: Onset, thunderclap headache onset (bleed). P: papilledema, raised intracranial pressure. P: Positional Intracranial hypotension. P: Precipitated by Valsalva maneuver or exertion Raised intracranial pressure. P: Progressive headache or substantial pattern change]. Similarly POUND mnemonic is very useful in diagnosing Migraine, it follows as, (1 point for each symptom). P: Pulsating. O: Duration of 4–72 hours. U: Unilateral. N: Nausea. D: Disabling.⁹

TTH being the most common headache with high incidence of associated mood disorder, is taken as a non-serious for being mild in most cases, but when severe and frequent cause work disability at schools or jobs and compromised quality of life with huge socioeconomic burden.¹³ The term TTH, is expected to be related to stress and anxiety but in fact has a stronger association with depression in a bidirectional cause and effect relationship.² Both anxiety and depression have almost equal incidence, albeit neglected, in both TTH and migraine.^{14,15}

Cluster headache (CH) is characterized by recurrent, severe one sided pain and autonomic symptoms in trigeminal nerve distribution. It has high tendency to affect young men with significant job impact accounting for absenteeism (30%), job loss (20%) and unemployment or dependence on disability payments (8%) and almost half report >50% reduction in

productivity during the headache. To complicate the matter further more than half attribute it wrongly to migraine.⁶

The frequency of headache being the most relevant clinical outcome is influenced by comorbid mood (especially depression) and sleep disorders (most important risk factor for chronification in TTH). The argument is strong to include the measure targeted to reduce the emotional burden (developing coping strategies and/or through adoptive cognitive behavioral techniques), addressing depression (psychological and therapeutic approach) and improving sleep quality must be an integral part of management of chronic TTH.⁴

The majority of patients with primary headache may be safely managed in the outpatient setting. Identifying the predisposing/ precipitating and/or perpetuating factors and addressing modifiable factors like adequate hydration, menstrual regularity, sleep hygiene, alcohol and substance abuse, excessive caffeine and/or lack of exercise needs individualized attention tailored to the subtype. TTH benefits most from anxiolytics and antidepressants. Prophylaxis medicine along with diet, mood and sleep improvement has important role in Migraine. The headache diary is very useful in tracing the compliance.¹⁶

Simple analgesics may suffice as first-line treatment for acute migraine, tryptans may be added as next step. Initiation of preventive therapy must be highly individualized based on the duration and severity of symptoms rather than chronicity, starting from low dose and increments at 2–3 weeks to achieve desired response or undesired effects limiting it. Gradual withdrawal may be considered after 6–12 months of successful preventive therapy. The non-responders needs to revisit the diagnosis, noncompliance or overuse. Dependency and overuse are the concerns with opioids. Headache being one of the common somatoform symptom, underlying mental health issues must be probed.¹⁷

Medication overuse headache must be watched for after regular medication overuse exceeding 3 months or more for a pre-existing headache. NSAID and paracetamol usage of ≥ 15 days per month, and tryptans and/or opioid usage ≥ 10 days per month is considered overuse. Diagnosis of underlying migraine or TTH may be masked and delayed and preventive medication is ineffective rather may perpetuate the overuse. Deprescription of the overused medications, at time may be as inpatient may be required.^{12,18}

CONCLUSION

Headache especially chronic is most likely to present in primary care setting. Disability index and severity index didn't show any typical pattern, TTH turned out to be more disabling. It is concluded that exact diagnosis into the subtypes has important therapeutic implications. Predisposing/ precipitating and/or perpetuating factors

have important implication in the management for specific subgroups. Addressing modifiable factors like adequate hydration, menstrual regularity, sleep hygiene, alcohol and substance abuse, excessive caffeine and/or lack of exercise needs attention tailored to each subtype. TTH benefits most from anxiolytics and antidepressants. Prophylaxis medicine along with diet, mood and sleep improvement has important role in Migraine. The non-responders needs a revisit to the diagnosis, noncompliance or overuse. Medication overuse headache must be watched for after regular medication.

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Conflict of Interest: The study has no conflict of interest to declare by any author.

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