The Professional Medical Journal
www.theprofesional.com

ORIGINAL PROF-0-3097

DOI: 10.29309/TPMJ/2019.26.02.3097

MIGRAINE;
THE MOST COMMON HEADACHE DISORDERS A NEUROLOGY CLINICAL PERSPECTIVE.

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Article received on:
12/03/2018
Accepted for publication:
25/09/2018
Received after proof reading:
31/01/2019

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ABSTRACT... Objectives: To determine the various patterns of headache presenting to Neurology OPD Liaquat University Hospital Jamshoro/Hyderabad. **Study Design:** Descriptive, cross-sectional study. **Setting:** Department of Neurology, Liaquat University of Medical & Health Sciences (LUMHS). **Period:** July to December 2016. **Methods:** Data was collected on developed profoma, the same was analyzed on SPSS 22nd version. **Results:** Out of 238 patients, 61 (25.6%) were male 177 (74.4%) were female patients. Age group distribution of study population ranged from 04 - 65 years with mean age was 31.66 with standard deviation of12.72. Out of 238 patients 170 (71.4%) were diagnosed as primary headache disorders, 56 (17%) were secondary headache while 12 (%) were labeled as cranial neuropathies and facial pains. Migraine without aura 113(65.3%) followed by tension type headache 35(20.2%) were most common primary headache disorder. Among secondary headaches Cervicogenic headache 16(30.2%) was most common cause followed by headache secondary to sinusitis, hypertension and trauma 8(15.1%), 7 (13.2%) and 6(11.3%) respectively. Trigeminal Neuralgia 9 (75.0%) was most common painful cranial neuropathies. **Conclusion:** Primary as well as secondary headache disorders are most prevalent in female at an age range of 21-40 years with majority of them suffering from migraine followed by tension and Cervical origin respectively.

Key words: Headache, Migraine, Tension Type Headache, Cranial neuropathy.

Article Citation: Lakhiar MA, Bughio AH, Arain AA, Lakhiar MA. Migraine; the most common headache disorders a neurology clinical perspective. Professional Med J 2019; 26(2):264-268. **DOI:** 10.29309/TPMJ/2019.26.02.3097

INTRODUCTION

Among the Neurologic disorders headache is one of the commonest clinical entity which represent the major bulk of patients at neurology outpatient clinics. The World Health Organization's ranking of causes of disability headache is among the 10 most disabling conditions for the two genders. Although headache has been an important cause of morbidity around the world, it has remained unrecognized in the developing world. The International Headache Society provides standardized definitions and classification system for headaches in the form of International Classification of Headache Disorders.[1] Headache disorders are classified into primary, secondary & headache due to cranial neuralgias and central fascial pain. Migraine is a type of primary headache characterized by pain of moderate to severe intensity of throbbing nature usually unilateral along with phonophobia, photophobia, and nausea vomiting.[2]

Certain brain areas like entorhinal cortex, medial orbital frontal gyrus, pars triangularis and anterior cingulate cortex are involved in cognitive and affective processing of pain and many previous studies have suggested their role in migraine patients in terms of connectivity and activation.[3-9] Migraine affects patient's personal, family and social quality of life along with the financial loss in the form of missing duties and paying for consultation and medicine charges(an old estimated >$13 billion/year). Sufferers of migraine seldom get satisfied so almost 50% of them stop medications after consultation although 28% show satisfaction over therapeutic measures.[10] Therapy for prevention and treatment is targeted to reduce the frequency, severity and to abort the attacks completely.[11] A symptom free period of 2 hours and 24 - 48 hours is assumed ideal as acute and sustained therapeutic response respectively.[12] Women are more affected by migraine then men and avoidance from chocolate, alcohol

and stress are helpful non-pharmacological measures. Pharmacological therapy consists of (1) Triptans which are serotonin agonists and include, amlotriptan, rizatriptan and sumatriptan is the prototype from this class affectively reduces the migraine severity in 70% patients (2) Ergot Alkaloids: these agents act on serotonin, alpha adrenergic and dopamine intracranial vascular receptors and include ergotamine and dihydroergotamine (3) NSAIDs: these are used for symptomatic relief and include aspirin, acetaminophen, ibuprofen etc (4) Prophylactic agents: many groups of drugs can be used for this purpose like anticonvulsants, tricyclic antidepressants, calcium channel blockers and beta adrenergic blockers. Mophine is useful when the patients fail to respond to others agents.[13] Rizatriptan 10 mg orally has superior results over placebo and sumatriptan.[14,15] Sumatriptan 6.5 mg transdermal patch formulation is superior to placebo as primary outcome in acute attack.[16] Half of the females (50%) with migraine show its association with menstrual cycle with reported episodes at two days pre and post menstruation.

The symptomatic therapy, peri-menstrual estradiol, triptans or NSAIDs are usual options for such patients and menstrual suppression is the other option in women requiring contraception.[17] There was a knowledge gape in this Hyderabad region of Sindh Pakistan regarding the distribution of different types of headache, a chief complaint which brings the majority of patients to neurology outpatient departments. The aim of this study was to characterize patients with headache disorders in tertiary care Hospital of Sindh.

MATHODOLOGY

This was descriptive cross-sectional study conducted at the Department of Neurology Liaquat University of Medical & Health Sciences Jamshoro / Hyderabad from July 2016 to December 2016. Patients information regarding biodata, age, sex, type of headache and associated factors was obtained from both genders on designed proforma following informed consent. Two hundred and thirty eight (238) patients were initially evaluated by History and Neurological examination for headache disorders followed by necessary investigations to establish final diagnosis. The diagnosis was made according to International criteria headache disorder (ICHD-III). Analysis of data was done on SPSS version 22 to present in tables and charts.

RESULTS

The mean age of patients was 31.66 $\pm$12.72 with a ranged of 04 - 65 years. Total study population was 238 out of which 61 (25.6%) and 177 (74.4%) were male and females respectively**.** out of which 50 (21.0%) were less than 21 years, 139 (58.4%) between 21-40 years and 49 (20.6%) were more than 40 years (Table-I).

Primary, secondary and cranio-facial pains were observed as 170 (71.4%), 56 (17%) and 12 (%) respectively (Graph-I). Further analysis showed that migraine cases were more common 137(79.19%) followed by tension type headache 35(20.23%) in primary while Cervicogenic headache 16(30.2%), was most common cause followed by sinusitis8 (15.1%), hypertension 7(13.2%) and trauma 6(11.3%) in secondary headache. Trigeminal Neuralgia 9 (75.0%) was most common painful cranial neuropathies as described in detail (Graph-II). Regarding type of headache it was observed that< 21 Years were 39 (78%),10 (20%),1 (2%), < 40 Years 107 (77%),27 (19%),5 (4%) and >40 Years27 (55%),16 (33%),6 (12%) were primary, Secondary and Painful cranial Neuropathies and Other facial pains. Primary headache disorders were more at age 21-40 years (Table-II). While female had more primary139 (79%) and secondary32 (18%) headache disorders as compared to males primary 34 (56%) and secondary 21 (34%) (Table-III).

Patient Age in years	Frequency/Percentage
<21 Years	50 (21%)
21 - 40 Years	139 (58.4%)
>40 Years	49 (20.6%)
Gender	
Female Male	177(74%) 61(26%)
Total	238 (100%)

Table-I. Age and gender distribution of study patients

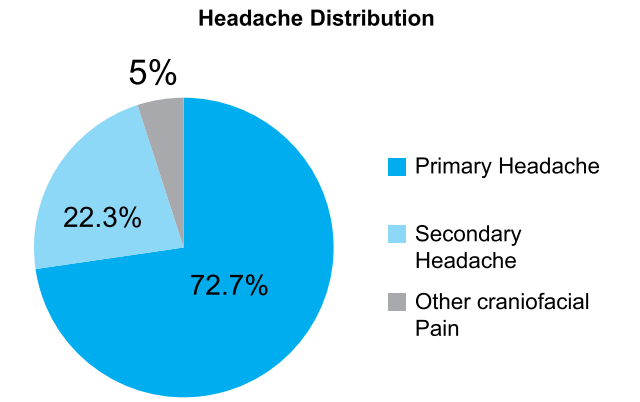

Figure-1. Frequency of headache disorders

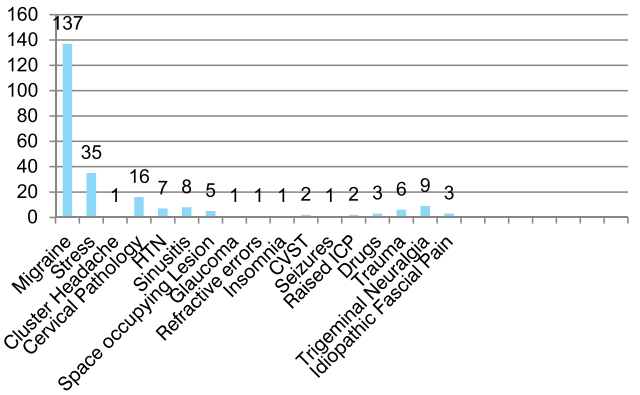

Figure-2. Distribution of Headache disorders according to etiology

Type of Headache	< 21 Years	< 40 Years	>40 Years
Primary Headache	39 (78%)	107 (77%)	27 (55%)
Secondary Headache	10 (20%)	27 (19%)	16 (33%)
Painful cranial Neuropathies and Other facial pains	1 (2%)	5 (4%)	6 (12%)
Total	50	139	49

Table-II. Age wise distribution of headache disorders

Headache	Male	Female
Primary Headache	34 (56%)	139 (79%)
Secondary Headache	21 (34%)	32 (18%)
Painful cranial Neuropathies and Other facial pains	6 (10%)	6 (3%)
Total	61	177

Table-III. Gender wise distribution of the headache disorders

DISCUSSION

The current study tried to provide an insight about the characterization of different headache disorders, one of the commonest neurological presentations. A previous national survey on 4223 individuals by A. A. Herekar (2017) showed age 34.4 ± 11.0 years with 46.3% and 53.7% male and female participation respectively was inconsistent with our results in that we had 238 headache patients while he had normal study subjects we had 74% and 26% male and female participants respectively however the mean age 31.66 ±12.72 and female predominance for migraine were consistent between the two studies.[18] Prevalence of migraine in India, Nepal, Russia and china was reported as 25.2%, 34.1%, 20 .8% 9.3% as mentioned in literature. What reasons are behind this variation is uncertain possibly cultural, environmental and genetic may have strong impact. Our finding accounts 57% for the migraine in total headache cases but this cannot be put into general population as target population was headache patients.[19-22]

Over intake of caffeine, tea and certain comorbidities may be responsible for migraine in general public while females show a reduced distribution with increasing age (a consisting finding in our study with previous studies) adolescence to peri menopausal years may be attributed to plasma levels of estrogen.[23] Prevalence of migraine in adult population of students was reported as 40.2 % in medical students, 37.5% in postgraduate students.[24] An Indian study by H. Shankar et al (2016) described the headache prevalence of 51.1% with female predominance pattern being highest in age range between18-29 year consistent with what we found.[25]

A Turkish study by Mustafa E et al (2012) revealed headache prevalence of 44.6% with migraine on top(16.4%) in majority were the women (24.6%) however age range was slightly different which was more than 40 years.[26] Arif D Herekar (2013) reported headache prevalence in Pakistani general public to be 81% and 76.6% while migraine 22.5% more common in females while TTH was 44.6% (tension-type headache)

more common in male.[27-28] M. Zahid showed a frequency of migraine as 65.0% and most of the cases >30 yrs old.[29] The variation in prevalence rates as estimated by different studies of is most likely due to differences in population samples, study methodology and classification.

CONCLUSION

Primary as well as secondary headache disorders are most prevalent in female at an age range of 21-40 years with majority of them suffering from migraine followed by tension and Cervical origin respectively.

RECOMMENDATIONS

Needs larger scale study to determine other characteristic of headache & their psychosocial impact?

General practitioners need to be appropriately oriented through workshops on the topic regarding evaluation, treatment & timely referral for Neurological consultations for early improvement in quality of life.

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2	Abdul Hafeez Bughio	Data collection and literature review.	
3	Ashique Ali Arain	Literature review and article writing.	
4	Manzoor Ali Lakhiar	Supervision of study.	