

Frequency of types of headache in the tertiary care center of the Hospital das Clínicas of the Universidade Federal de Minas Gerais, MG, Brazil

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SUMMARY

Objective: To assess the frequency of different diagnoses of headaches in the Headache Outpatient Clinic of the Hospital das Clínicas of the Universidade Federal de Minas Gerais (AmbCef-UFMG). **Methods:** Cross sectional study with 289 patients consecutively attended to at AmbCef-UFMG. Headaches were diagnosed based on the criteria established by the International Classification of Headache Disorders (ICDH-2004). **Results:** The average age of patients was 42.6 years, mostly women (86.9%) with less than nine years of education. Primary headaches were the most common type, with migraine found in 79.8% of cases, and tension-type headache (TTH) in 20.4%. Among the secondary types, the most common was headache caused by overuse of analgesics (16.6%), followed by less common types, such as idiopathic intracranial hypertension. Chronic daily headache (CDH) was found in 31.8% of cases. **Conclusion:** This study confirms literature data showing migraine as the most common headache in tertiary care centers. The expressive number of cases of CDH and headaches caused by overuse of analgesics indicates that, starting at the primary care level, patients should be advised to avoid the abuse of symptomatic drugs.

Keywords: Primary headache; epidemiology; tension-type headache; prevalence; tertiary care center.

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Study conducted at the Headache Outpatient Clinic of the Department of Neurology of Hospital das Clínicas of UFMG, Belo Horizonte, MG, Brazil

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INTRODUCTION

Headache is a universal symptom and it is estimated that 95% of men and 99% of women will have at least one episode throughout their life, provided that about 40% have it quite regularly¹. Even communities located far from big urban centers present high rates of headache, as shown by an epidemiologic study carried out with the entire population of a small city in the countryside of Minas Gerais. In this study, 65.4% of inhabitants had headaches during a period of 12 months².

Headache has multiple causes and the ones resulting from functional disorders of the central nervous system, called primary headaches, as the tension-type headache (TTH) and migraines, are the predominant type. Headaches may vary in intensity and frequency, and may be extremely disabling³. Due to the complexity and morbidity of some cases, there is a demand for assistance in specialized centers. The frequency of the types of headaches treated in this context is different when compared to the frequency observed in the community^{3,4}.

If, on one side, TTH figures as the most prevalent headache in the overall population, migraine is the predominant type in tertiary care centers³⁻⁷. This difference can be explained, at least in part, by the fact that episodic TTH, although very common, is less disabling³. Conversely, migraine is a typically intense headache accompanied by symptoms such as nausea and vomiting, or photophobia and phonophobia⁸.

The headache may be disabling not only due to its intensity, but also due to the frequency of attacks, which can be almost daily. This syndrome is known as chronic daily headache (CDH), and its prevalence in the overall population is approximately 5%, while in tertiary care centers it ranges from 30 to 90% of the cases^{4,9}.

Knowing the headache profile of patients attended to in tertiary care centers may help the preparation of diagnostic and therapeutic processes at the primary and secondary care levels, enabling a more suitable treatment of the cases. In this regard, the frequency of different diagnoses of headaches in the Headache Outpatient Clinic of the Hospital das Clínicas of the Universidade Federal de Minas Gerais (AmbCef-UFMG) is presented.

METHODS

This was a cross-sectional descriptive study that included 289 patients consecutively attended to at the AmbCef-UFMG from February to May 2011, the period in which data was collected. Assistance in this tertiary care center is scheduled after screening of patients over 12 years of age, referred to the Department of Neurology of the Hospital das Clínicas of the Universidade Federal de Minas Gerais. Referrals are made mainly by primary care physicians that provide assistance in basic health care units.

Patients attended to at the emergency department by the neurology team are referred directly to the headache outpatient clinic.

Appointments include a clinical-neurological evaluation and a semi-structured interview for diagnosis of the headache, pursuant to the criteria of the International Classification of Headache Disorders-2004¹⁰. Patients who report more than one type of headache receive specific diagnoses for each type. More complex cases are discussed at the end of the appointment, and diagnoses are determined by a committee. After a neurological evaluation, patients are attended to by a multidisciplinary team formed by dentists, physiotherapists, nutritionists, psychiatrists, psychologists, and speech therapists.

In the cases of CDH associated with analgesics abuse, the final diagnosis is only established two months after the discontinuation of the abuse of symptomatic drugs, time required for the clinical features of the cases to assume the clinical pattern prior to the chronic pain condition.

Initially, a descriptive analysis of the variables used in the study was performed. For nominal or categorical variables, frequency distribution tables were prepared. For continuous variables, measures of central tendency and variability were used.

RESULTS

The 289 individuals participating in the study showed an average age of 42.6 years (standard deviation [SD]: 15.0; minimum: 14.0; maximum: 88.0), with the predominance of women (86.9%). Most of them presented low education levels; 52.3% of the patients had less than nine years of formal education, 35.0% had between nine and 11 years, and only 12.7% had studied more than 11 years.

Most of patients showed primary headaches; migraine was the most common diagnosis, present in 79.8% of the cases. Among the different subtypes, migraine without aura was the most common diagnosis (42.2%), followed by migraine with aura (25.9%). TTH was the second most frequent type of primary headache, found in 20.4% of the cases. TTH was, more common than the stabbing headache, diagnosed in 46 patients (15.9%). Other less common types of primary headaches were diagnosed, such as chronic paroxysmal hemicranias ($n = 5$) and cluster headache ($n = 2$).

Among secondary headaches, the most common type was the headache caused by analgesics abuse (48 individuals or 16.6% of the cases), as frequent as primary stabbing headache. The second most common type of secondary headache resulted from non-vascular intracranial disorder (10 cases), which included cases of idiopathic intracranial hypertension. All headaches described, as well as other types of less frequent headaches, are shown

in Table 1. It is important to note that the majority of individuals received more than one diagnosis, which explains the higher number of diagnoses compared to the number of participants.

Most of the cases of primary stabbing headache, TTH, and headache caused by analgesics abuse were found in patients with migraine. Among these, 20.3% had primary stabbing headache, 18% had TTH, and 19.4% had headache caused by analgesics abuse. The associations of these diagnoses with migraine is shown in Table 2.

CDH was found in 31.8% of cases. The causes were headache due to overuse of analgesics (16.6% of total patients), chronic migraine (11.7%), chronic tension-type headache (11%), chronic paroxysmal hemicrania (1.7%), and chronic post-traumatic headache (1%).

DISCUSSION

As in the overall population, the predominant patient profile found in this outpatient clinic was women in the age group from 20 to 49 years old^{6,11,12}, i.e., an economically active population of reproductive age, in which crises of

disabling and mistreated pain will entail damages to the individual and to society. Steiner et al., in an English study, estimated 5.7 days of work or school lost per year per individual with migraine¹³.

The present sample showed a wide prevalence of individuals with low education levels. This variable varies greatly among centers. Brazilian studies have described a predominance of headache attacks among patients with low socioeconomic level^{6,12,14}. Nonetheless, the English study did not show this trend¹³, which reflects the nature of Brazilian centers, predominantly comprised of public healthcare services.

The frequency of the types of headache diagnoses in the overall population differs from that verified in tertiary care centers, possibly due to the higher or lower level of morbidity caused to individuals, which influences the demand for medical assistance^{4-7,15}. Migraine is the most prevalent type in tertiary care centers, with rates ranging between 35% and 80%⁵⁻⁷. At this outpatient clinic, migraine was diagnosed with the same frequency, 79.2% of the cases, as that of a study carried out in 2005 with 106

Table 1 – Distribution of headache cases, by type, among patients attended to at the Headache Outpatient Clinic of the UFMG, Belo Horizonte, MG, Brazil, 2011 (n = 289)

Diagnoses	n	%
Migraine without aura	122	42.2
Migraine with aura	75	25.9
Chronic migraine	34	11.7
Infrequent episodic tension-type headache	10	3.4
Frequent episodic tension-type headache	22	7.6
Chronic tension-type headache	32	11.0
Cluster headache	2	0.7
Chronic paroxysmal hemicrania	5	1.7
Primary stabbing headache	46	15.9
Chronic post-traumatic headache	3	1.0
Headache attributed to cranial or cervical vascular disorder	2	0.7
Headache attributed to non-vascular intracranial disorder	10	3.4
Headache caused by overuse of analgesics	48	16.6
Cranial neuralgias and central causes of facial pain	8	2.7

Table 2 – Distribution of headache cases, according to the association between migraine and other diagnoses of headache, among patients attended to at the Headache Outpatient Clinic of the UFMG, Belo Horizonte, MG, Brazil, 2011

Diagnosis	Migraine	
	n	%
Episodic tension-type headache	18	8.1
Chronic tension-type headache	22	9.9
Primary stabbing headache	45	20.3
Headache caused by overuse of analgesics	43	19.4

patients. At a specialized service in São Paulo, 37.98% of patients presented migraine as their main complaint, and 22.65% presented TTH⁶. This difference in the migraine frequency may reflect methodological differences, as the study in São Paulo was retrospective and the present study was cross-sectional. Nonetheless, the higher prevalence of migraines is evident and reflects its clinical importance in the decision to seek medical assistance. Additionally, its association with other primary headaches is common, and may reach 40% of cases^{16,17}. For example, primary stabbing headache was found in approximately one-fifth of the patients with migraine.

TTH, whether episodic or chronic (CTTH), was the second most frequent cause of headache, while in the community it is the most common type, with a prevalence ranging from 30 to 80%¹⁰. A Chinese study found a prevalence of 66.9% for TTH in a tertiary care center¹⁸.

CDH was responsible for approximately one-third of the cases, while the prevalence in the community is between 3% and 7%^{9,19}. The most frequent cause of CDH was migraine associated with the excessive use of analgesics. Disproportion between the prevalence in the community and in tertiary care centers appears to result from the higher clinical complexity of referred patients, who frequently do not respond to treatment at the primary or secondary care levels. It must be highlighted that the efficacy of the prophylactic therapy while analgesics abuse persists is low.

Headache is indeed a global public health problem, acknowledged as such by the World Health Organization (WHO), especially in countries composing the BRIC group (Brazil, Russia, India, and China), where planning of preventive actions and treatment still faces several challenges^{2,9}. In Brazil, the Family Health Program is proving to be effective in expanding the population's access to basic care services²⁰, especially with respect to control of chronic conditions such as diabetes mellitus and arterial hypertension^{21,22}. Despite this progress, no headache-specific approach has been developed on a national basis².

Some authors attribute this to the diagnosis difficulty resulting from the lack of a biomarker in primary headaches²³, as well as the general practitioner's fear of the possibility of a potentially fatal secondary cause²⁴. Galdino et al. suggested that the lack of dissemination of the International Headache Society's criteria to primary care physicians imposes an important barrier to their approach of headaches²⁴. In this regard, a Brazilian study noted that the correct migraine diagnosis was achieved only in 44.9% of the cases assessed by non-specialists.²⁵ Incorrect diagnoses frequently lead to inappropriate treatments such as the abuse of analgesics or anti-inflammatory drugs, generating a worse prognosis, and consequently increasing the proportion of patients that will eventually need to be referred to specialized medical care²⁵⁻²⁷.

The present study, due to its descriptive nature and to the inclusion of a case selection specific to a single tertiary care center, has limitations regarding the understanding of the issue at other levels of assistance. Additionally, the lack of longitudinal monitoring of cases regarding the instituted treatment is another factor limiting the comprehension of strategies that may optimize clinical improvement.

The high frequency of excessive use of medications detected in the sample indicates that this issue (abuse of analgesics) is very important, with public health implications.

CONCLUSION

Knowledge regarding the most frequent headaches in a specialized outpatient clinic can help the differential diagnosis of cases attended to at the primary care level.

The significant number of CDH cases resulting from migraine associated with the excessive use of analgesics indicates that, at the primary care level, educational interventions should be made by several professionals, including community health workers, about the importance of avoiding the excessive use of analgesics. Additionally, family health physicians and secondary care neurologists should provide early preventive treatment, especially to women aged between 20 and 49 years who present symptoms suggestive of migraine.

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