

HEADACHE EPIDEMIOLOGY IN VITÓRIA, ESPÍRITO SANTO

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ABSTRACT - This is the first headache survey in the region of Vitória, ES Brazil. A high prevalence of headache sufferers was found (52.8%). Headache was more common among women (63.9%) and less common among people older than 55 years old. The type of professional activity was not related with the headache prevalence. The most frequent causal attribution was stress. Most headache sufferers are not under regular medical treatment (9%), and most of them use analgesic drugs without proper orientation. The most used compounds are combinations with caffeine (33%) and simple analgesics (52.3%).

KEY WORDS: headache, prevalence, self medication.

Epidemiologia da cefaléia em Vitória, Espírito Santo

RESUMO - Este estudo é o primeiro a avaliar a prevalência da cefaléia na região de Vitória, ES. Demonstrou-se alta prevalência de portadores de cefaléia (52,8%), com maior freqüência no sexo feminino (63,9%) e em pessoas com menos de 55 anos. Não houve diferença de prevalência em relação ao tipo de atividade profissional. O estresse foi apontado como o fator causal mais freqüente. Verificou-se que poucos portadores de cefaléia fazem acompanhamento médico regular (9%) e que a maioria usa medicamentos analgésicos sem orientação adequada, sendo os medicamentos mais utilizados combinações contendo cafeína (33%) e os analgésicos comuns (52,3%).

PALAVRAS-CHAVE: cefaléia, prevalência, auto-medicação.

The importance of primary headaches is related to the high frequency of headache disorders, considerable impact of headache on work and social activities, and to the consequences of a considerable consumption of drugs by headache sufferers¹. Several studies have focused on the epidemiology of headache in different cities and in specific populations in Brazil²⁻⁵.

Here we report the results of the first large epidemiological headache survey among inhabitants of the region of Great Vitória, Espírito Santo Brazil. This study aimed to identify the prevalence of headache symptoms, the causal attributions of headache, the medical assistance sought by the headache patients, and the pattern analgesic use reported by headache sufferers in this region of the country.

METHOD

A questionnaire was administered by a group of medical students attending a specialized headache service. This questionnaire was randomly applied to Great Vitória region inhabitants, including the cities of Vi-

tória, Vila Velha, Cariacica, and Serra. The interviewers have randomly selected people in public areas such as bus stations, schools, churches, supermarkets, banks, shopping centers, and sidewalks. Gender, age, and main occupation data were recorded. The individuals were grouped in three age groups: <30, 30-55, and >55 years. The occupation type was classified into the following categories: home, employed, liberal professional, unemployed, rested, or student. The prevalence of headache symptom was assessed asking if the individual consider him or herself as a headache sufferer. People answering no were not considered to have headache and no further questions were done. For the ones that considered him or herself as a headache sufferer the second question has evaluated the causal attributions of headache asking about the etiology they attribute to the headache. The answers were grouped in the following categories: 1) unknown, 2) stress, tension, or depression, 3) migraine, 4) sinusitis, 5) visual disturbances, 6) high blood pressure, 7) hormonal problems and menstruation, 8) hunger, 9) allergy, and 10) others. Then the individuals were evaluated about the use of analgesic drugs, what kind of analgesic they use, and the amount of analgesic tablets

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in a week he or she uses. The reason for the specific analgesic choice was evaluated asking them who have recommended the analgesic product. The answers were categorized into the following groups: medical prescription, self medication, drugstore seller recommendation, unprofessional advice, and unknown. Individuals with headache were also asked if they were under regular medical assistance for this problem. Chi square was used for statistical comparisons of headache prevalence between different age groups and different professional activities.

The study protocol was submitted to the research ethic committee of Escola de Medicina da Santa Casa de Misericórdia de Vitória (EMESCAM) and was approved.

RESULTS

The questionnaire was applied to 2500 inhabitants of Vitória region, being 1477 (59.1%) women. The mean age was 33.4 years (SD 16.6). The number of individuals referring headache was 1320 (52.8%). The prevalence of headache was higher among women, 925 (62.6%) of women had headache while only 395 (38.6%) men were headache sufferers. The prevalence of headache was significantly lower among people over 55 years old ($p < 0.001$) (Table 1). The prevalence of headache was higher among people under 30 years old when compared with people over 30 years old ($p < 0.025$), but it was not different of the headache prevalence of people between 30-55 years old.

The occupation types were: home (287), employed (1098), liberal (360), unemployed (48), rested (126), and student (468). The other occupation types were less frequent and were not included in any of these groups. In general there were not differences in the headache prevalence between those occupation groups, however headache was less frequent among rested people ($p < 0.01$). This could be associated with the decreasing frequency of headache with age. Headache was more prevalent among home working women (60%, $p < 0.025$). This difference may actually reflect the gender influence, since this group included only women (Table 2).

The most frequent causal attributions of headache symptoms were the following: 304 (23%) individuals referred that they did not know the cause of headache, 253 (19.1%) mentioned that stress of any kind or depression should be the headache etiology, 158 (12%) declared to have migraine, 149 (11.3%) said that sinusitis was the cause. Other causal attributions were: 99 (7.5%) ophthalmologic disorders, 68 (5.2%) correlated headache with hyper-

tension, 62 (4.7% of all individuals and 6.7% of the women with headache) declared headache as a consequence of menstruation, 39 (3%) hunger, 26 (2%) allergy, 25 (1.9%) sunlight exposition, 22 (1.7%) sleep problems, 17 (1.3%) digestive problems, 12 (0.9%) infections, 10 (0.8%) alcohol consumption. Other factors such as coffee deprivation, hypoglycemia, noise, dietary problems, smoking, physical activity, and odors were rarely mentioned. Only 369 (36.4%) of those diagnosis were established by a physician. Most of these diagnosis, 623 (61.5%), were self made diagnosis, and 19 (1.9%) were given by a friend or a relative.

Most (69.9%) of headache sufferers declare to regularly use analgesics for pain relief, however only 122 (9.2%) of the headache population were under regular medical attention for this problem, and only 263 (28.5%) have chosen the analgesic based on medical prescription. Other prescription sources were: self medication-522 (56.6%), friend or relative-115 (12.5%), and drugstore seller-22 (2.4%). Most analgesic users, 490 (53.1%), declared to take one to five analgesic tablets a week, 290 (31.4%) used less than one analgesic tablet a week, 83 (9%) used 6 to 10 tablets a week, and 46 (5%) used more than 10 tablets a week. The most used analgesic drug was dypirone (26.8%), followed by acetaminophen (25.5%), and the combination of isomethepten plus dypirone and caffeine (16.5%). The products and their frequency of use are listed on Table 3.

Table 1. Prevalence of headache according to the age group.

Age (years)	Headache	Percentage (%)	p
<30	690	55.8	<.025
30-55	556	53.1	>.50
>55	76	35	<.001

Table 2. Headache prevalence according to the professional activity.

	Headache	Percentage (%)	p
Home	174	60	<.025
Employed	596	54.3	>.5
Liberal	191	53	>.5
Unemployed	23	47.9	>.25
Rested	48	38	<.01
Student	247	52.8	>.25

Table 3. Frequency of use of analgesic products.

Analgesic	Number of users	Frequency (%)
Acetaminophen + caffeine	1	0,11
Rofecoxib	1	0,11
Tryptans	2	0,22
Homeopathic product	2	0,22
Acetaminophen + fenilpropanolamin + feniltoloxolamin	3	0,33
Dipyrone + prometazine + adifenin	4	0,43
Diclofenaco	5	0,54
Escopolamin + dipyrone	5	0,54
Mefenamic acid	9	0,98
Acetylsalicylic acid	12	1,30
Uncertain	13	1,41
Scopolamine	15	1,63
Others	35	3,79
Ergot derivatives	39	4,23
Acetylsalicylic acid + caffeine	47	5,09
Orphenadrine + dipyrone + caffeine	101	10,94
Isometheptene + dipyrone + caffeine	152	16,47
Acetaminophen	226	24,49
Dipyrone	247	26,76

DISCUSSION

This study aimed to assess the importance of headache in this region of Brazil. The assessment we have made has some methodological differences from other previous headache prevalence studies carried out in other regions. We have decided not to assess the prevalence of headache during a limited period of time, such as 6 months, 1 year, or 2 years. Although to limit the period of time may exclude past diseases, this procedure may include for instance people with a recent disease leading to a secondary headache. We asked individuals if he or she consider him or herself a person with headache or a headache sufferer. We believe that with this procedure we have included only people who consider that headache is a health problem for him or herself and have excluded people with an isolated episode of headache. Also, we did not assess specific headache disorders, such as migraine or tension type headache, like several other epidemiological studies have previously done. We aimed a rapid questionnaire once it was randomly applied to people walking or working in public places. Asking specific questions about headache pattern, localization, and associated symptoms would certainly take too much time to be applied.

The prevalence of headache was high, and the prevalence among women was higher than among men. This difference has been found in previous studies⁶. The type of professional activity has not influenced the headache frequency. Most studies have shown a uniform prevalence of headache in different social and economic groups⁷. In recent surveys an increased risk of headache has been found in lower-income groups^{6,7}. In this study we have not assessed income or education levels. However, we have verified that unemployed people had the same headache prevalence than active working people. We have found a smaller prevalence of headache among rested people. We believe this correlates with the decreasing prevalence of headache with increasing age, like it was shown in previous studies⁸.

Causal attributions were questioned in order to assess the perceived causes of headache among headache sufferers. Many individuals (23%) did not have any kind of explanation for this symptom. Among headache sufferers with a causal explanation for headache symptoms the most frequent one was stress of any kind followed by migraine and sinusitis. In a previous Australian study, Fernandez and Sheffield have also found that the main causal

attribution among headache sufferers was mental stress⁹. The high frequency of individuals referring sinusitis as the etiology of their headache problem is surprising once International Headache Classification Criteria considers only acute sinusitis as a headache cause¹⁰. This could be due to the fact most diagnoses were not done by a physician, since only 36.4% of those headache sufferers had their etiology given by a physician. Also, it must be considered that some physicians are not yet familiar with such diagnostic criteria. It is obvious that huge discrepancies exist between objective medical information and subjective perceptions about the etiology of headache. However, the knowledge of the causal attributions can be important for educational purposes and in the establishment of public health policies for headache patients.

Most of the headache sufferers declared to use analgesic drugs. The most common prescription source was self-medication. In a study in a city of South Brazil, Vilarino et al. have found headache as the main complaint among self-medicated people¹¹. They have found age, education level, and periodic medical consultation as significant statistical factors in self-medication risk. The small percentage of people under regular headache medical care in our region is certainly related with the high percentage of self-medicated headache population we have found. Two other reasons have certainly been implicated in the high level of self medication we have found. The first reason is the deficiency in public health system to provide adequate and specialized treatment for headache sufferers. The second is the availability of simple analgesics and combinations that can be easily bought without any kind of medical prescription in our region as well as in all regions of our country.

It is worrisome that 14% of the headache sufferers declared to use more than five analgesic tablets a week. In the past decades there have been several studies showing that besides the risk of hepatic and renal complications of analgesics overuse, they also are associated with the risk of transformation of migraine into to chronic daily headache/transformed migraine¹². In this study, the most used isolated analgesic was dypirone, followed by paracetamol. The combinations with caffeine were even more common than Dypirone, with 33% of patients taking one of the four combinations reported, but less frequent than common analgesic products (52.3%) (Table 3). This finding is relevant since caffeine withdrawal has been associated with rebound

headache¹³. Krymchantowsky has described that the combination of simple analgesics and caffeine was the most overused category of overused medications in a population of patients with transformed migraine, followed by simple analgesics¹³. Although we have not studied specific modalities of headache, it is possible that the pattern of self medication we have found is associated with a significant risk of transformed migraine in our region, specially considering that the type and amount of analgesic ingestion play a key role in the development of this condition. In fact, in our specialized headache ambulatory we have found that transformed migraine represents 25.2% of the diagnosis (unpublished data).

We conclude that these data demonstrate that headache is an important public health problem in our region. Although 36.4% were diagnosed by a physician, only 9.2% of headache sufferers are still under medical assistance for this problem. This reflects an inefficient medical care system for this kind of medical problem. Also, it was shown that public health policies such as the divulgation of self medication risks are necessary. We hope these data can stimulate health authorities of our region to give more attention to primary prevention, diagnosis, and treatment of headache disorders.

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