

# The need for preventive therapy in primary headaches

## A necessidade da terapia preventiva nas cefaleias primárias

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### ABSTRACT

**Introduction:** Primary headaches are common conditions. In Brazil, the prevalence of migraine is 15.2%, tension-type headache 13% and chronic daily headache (CDH) 6.9%. Although frequent disorders a proportion of patients are undertreated. Patients patterns of headache care can trend toward acute medication only and those in need of prevention may not receive it. **Objective:** To estimate the rates of preventive treatment in primary headache sufferers. **Methods:** A telephone interview containing questions about headache and socio-demographic characteristics was applied to 3,848 people from 27 States of Brazil, in its five geographical regions. We considered MIDAS > 10 points as a marker for the need of preventive treatment. Patients were asked if they were taking any medication on a daily basis or any treatment to prevent headaches from happening. Subjects were divided into: 1. Those who responded positively for the question regarding preventive treatment regardless of the treatment type. 2. Those who responded positively for the question, but only medications or treatments studied for migraine prevention, labeled as "Correct treatment" 3. Those who responded positively for the question, but only medications or treatments from the prevention consensus (Brazilian Headache Society), labeled as "Consensus treatment" **Results:** In total, 12.8% of primary headache sufferers had MIDAS higher than 10, meeting criteria for prophylactic treatment, but only 8.4% of them reported it, 3.9% were using a right preventive treatment. The percentage of patients in need for prevention was 24.7% in migraine, 15.6 % in probable migraine, 5 % for tension-type headache (TTH)

and 4% for probable TTH. Only 2.6% of migraineurs, 7.5% of probable migraine patients, 4.3% of tension-type headache and 0% of probable TTH received proper preventive treatment **Conclusion:** Primary headaches are common, debilitating conditions but a substantial proportion of those who might need prevention do not receive it. Patient education, public health initiatives in order to deliver migraine and other primary headaches treatment for the general population should be considered not only in Brazil, but worldwide.

**Keywords:** Migraine; Tension-type headache; Prevention, epidemiology.

### RESUMO

**Introdução:** As cefaleias primárias são condições comuns. No Brasil, a prevalência da migrânea é 15,2%, da cefaleia do tipo tensional é 13% e da cefaleia crônica diária (CDH), 6,9%. Apesar de tratar-se de doenças frequentes, uma proporção dos pacientes é subtratada. Os padrões de manejo da cefaleia dos pacientes podem levar ao uso exclusivo de medicamentos para o tratamento agudo das crises, e aqueles que necessitam de prevenção podem não recebê-la. **Objetivo:** Estimar as taxas de tratamento preventivo entre os indivíduos portadores de cefaleias primárias. **Métodos:** Uma entrevista telefônica contendo questões sobre cefaleia e características sociodemográficas foi aplicado a 3.848 pessoas de 27 estados brasileiros, nas suas cinco regiões demográficas. Nos consideramos um escore na escala MIDAS > 10 pontos como um marcador da necessidade de tratamento preventivo. Os pacientes foram questionados quanto ao uso de qualquer medicação em

um padrão diário ou de qualquer tratamento para prevenir a ocorrência de crises de cefaleia. Os indivíduos foram divididos em: 1. Aqueles que responderam positivamente à questão sobre o tratamento preventivo, independentemente do tipo de tratamento. 2. Aqueles que responderam positivamente à questão, mas apenas com medicamentos ou tratamentos estudados no tratamento preventivo da migrânea, rotulados como "tratamento correto". 3. Aqueles que responderam positivamente à questão, mas apenas com medicamentos ou tratamentos citados no consenso sobre tratamento profilático da Sociedade Brasileira de Cefaleia, rotulados como "tratamento consenso". **Resultados:** No total, 12,8% dos indivíduos acometidos por cefaleias primárias apresentaram MIDAS maior que 10, preenchendo critérios para tratamento profilático, porém apenas 8,4% deles relataram-no, apenas 3,9% destes utilizando um tratamento correto. A porcentagem dos pacientes necessitando de prevenção foi 24,7% na migrânea, 15,6% na migrânea provável, 5% na cefaleia do tipo tensional e 4% na cefaleia do tipo tensional provável. Apenas 2,6% dos migranosos, 7,5% pacientes com migrânea provável, 4,3% daqueles com cefaleia do tipo tensional e 0% daqueles com cefaleia do tipo tensional provável receberam tratamento preventivo adequado. **Conclusão:** As cefaleias primárias são condições debilitantes e comuns, porém uma proporção substancial daqueles que poderiam necessitar de prevenção não a recebem. Educação dos pacientes e iniciativas de saúde pública voltadas a proporcionar à população tratamento para a migrânea e outras cefaleias primárias devem ser consideradas não apenas no Brasil, mas globalmente.

**Palavras-chaves:** Enxaqueca; Migrânea; Cefaleia do tipo tensional; Prevenção, Epidemiologia.

## INTRODUCTION

Primary headaches are common disorders worldwide.<sup>1</sup> In Brazil, the prevalence of migraine is 15.2%,<sup>2</sup> tension-type headache 13%<sup>3</sup> and chronic daily headache (CDH) 6.9%.<sup>4</sup> Most headache sufferers have high frequency of attacks during the productive years of their lives, disrupting their capacity to work on the migraine days. Even if not absent from work, these sufferers have lower productivity during the headache attacks.<sup>5-6</sup>

Migraine and other primary headaches treatment can be acute and preventive. Frequent headaches should be treated preventively, with cautious use of acute medications. Patients patterns of headache care can trend toward acute medication only and those in need of prevention may not receive it.

In the American Migraine Prevalence Study (AMPP) 25.7% of migraineurs met criteria for prophylaxis, but just 13.0% reported current use of daily preventive migraine medication. More than one in four migraineurs are candidates for preventive therapy, but the majority who might benefit from prevention do not receive it.<sup>7</sup>

Based on the Brazilian Headache Epidemiology Study we evaluated the number of candidates for prophylaxis in sufferers of different types of primary headaches, and the proportion of individuals receiving it, estimating the degree of under treatment in our population.

## METHODS

### Sample and Survey

The Brazilian Headache Epidemiology Study is an observational, cross-sectional population-based study. 3,848 telephone interviews were made (2,307 for females and 1,541 for males). The subjects aged 18-79 year, and were from 27 States of Brazil, in its five geographical regions.

A detailed description of its methodology is published elsewhere.<sup>2-4</sup>

The questionnaire included questions about socio-demographic characteristics of the population, as well as questions about headache, based on the second edition of the International Classification of Headache Disorders (ICHD-II).

### Patterns of medical treatment

The interview contained the MIDAS' questionnaire, and questions about frequency, intensity, localization, duration of headache, preventive and acute medication use. Then we stipulated MIDAS > 10 points as a marker for the need of preventive treatment. Patients were asked if they were taking any medication on a daily basis or any treatment to prevent headaches from happening. The percentage of subjects who used preventive medication was divided into 3 groups: 1. Those who responded positively for the question regarding preventive treatment regardless of the treatment type; 2. Those who responded positively for the question, but only medications or treatments studied for migraine prophylaxis, labeled as "Correct treatment"; 3. Those who responded positively for the question, but only medications or treatments from the prevention consensus (Brazilian Headache Society), labeled as "Consensus treatment".

**Data analysis**

Data from subjects were analyzed as previously described to estimate prevalence and variation in prevalence by demographic factors. Fisher or chi square were used to estimate proportions,  $p < 0.01$  was considered significant.

**RESULTS**

In total, 12.8% of primary headache sufferers were in MIDAS higher than 10, meeting study criteria for prophylactic treatment. Only 8.4% of patients reported this type of treatment (91.6% did not receive prevention), and 3.9% were using any right preventive treatment.

Migraine affected 15.2% of the Brazilian population, 24.7% had MIDAS higher than 10, 6.1% of the entire population should receive a prophylactic treatment, approximately 11,685,000 individuals (estimated Brazilian population by 2010 is 190,000,000 inhabitants). Only 2.6%, however, were receiving a correct preventative treatment.

Tension-type headache prevalence was 13%, 5% should receive prevention by the same criteria, 0.65% of the entire population (1,235,000 individuals), but again, only 4.3% of TTH sufferers reported using a right prophylactic medication.

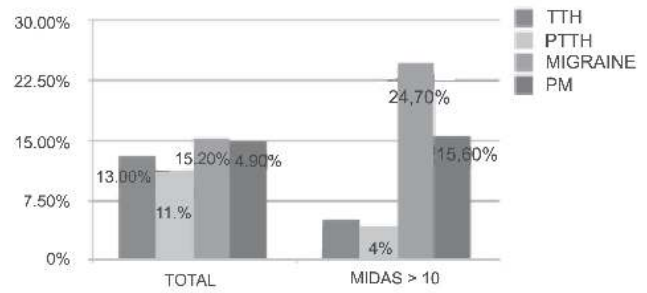


Figure 1. One-year prevalences for primary headaches in the general Brazilian population and proportion of patients with MIDAS higher than 10. TTH: tension-type headache, PTHH: probable tension-type headache, PM: probable migraine.

The number of patients who presented MIDAS higher than 10 was significantly more common in migraine patients than probable migraine patients ( $p < 0.001$ ).

Probable migraine and probable tension-type headache also followed the same pattern (Figure 1 shows general prevalences of primary headaches and proportion of patients with MIDAS higher than 10). Probable migraine was found in 14.9% of the population, 15.6% needed prevention (2.3% of the population, 4,370,000 individuals), but only 7.5% received proper preventive treatment. Probable tension-type headache was present in 11%, 4% needed prevention (0.44% of the population, 860,000

Table 1. Use of prophylaxis in patients with migraine and tension-type headache subtypes

	Total		Use proph. of total		Use right proph. of total		Right proph. of who use		MIDAS >10		MIDAS >10 & use proph.		MIDAS > 10 & use right proph.		MIDAS > 10 & use cons. proph.	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
TTH	457	11.8	10	2.2	2	0.4	2	20	23	5	4	17.4	1	4.3	1	4.3
ETTH	431	11.2	7	1.6	1	0.2	1	14.3	18	4.1	1	5.5	0	0	0	0
CTTH	26	0.6	3	11.5	1	3.2	1	33.3	5	19.2	3	60	1	20	1	20
PTTH	415	10.7	5	1.2	1	0.2	1	20	18	4.3	0	0	0	0	0	0
PETTH	375	9.7	5	1.3	1	0.3	1	20	13	3.5	0	0	0	0	0	0
PCTTH	40	1	0	0	0	0	0	0	5	12.5	0	0	0	0	0	0
Migraine	627	16.3	51	8.1	29	4.6	29	56.8	155	24.7	12	7.7	4	2.6	1	0.6
EM	553	14.4	35	6.3	20	3.6	20	57.1	120	21.7	8	6.6	4	3.3	1	0.8
CM	74	1.9	16	21.6	9	12.1	9	56.2	35	47.3	4	11.4	2	5.7	2	5.7
PM	595	15.5	35	5.9	12	2	12	34.3	93	15.6	13	14	7	7.5	3	3.2
PEM	502	13	26	5.2	11	2.2	11	42.3	72	14.3	8	11.1	6	8.3	3	4.1
PCM	93	0.2	9	9.7	1	1	1	11.1	21	22.6	5	23.8	1	1.4	0	0

TTH: Tension-type Headache; PTTH: Probable Tension-type Headache; CTTH: Chronic Tension-type Headache; ETTH: Episodic Tension-type Headache; PCTTH: Probable CTTH; PETTH: Probable ETTH; PM: Probable migraine; EM: episodic migraine; CM: Chronic migraine; PEM: probable EM; PCM: probable CM

individuals), none of the patients reported receiving preventive treatment.

Adding migraine with probable migraine, considering both as only one disease, 30.1% of the population would be affected, 8.4% of the whole population would need prophylaxis, 16,055,000 people. Table 1 describes the total number of primary headache diagnosis patients, number of patients with MIDAS higher than 10 and number of patients who reported any prevention treatment.

## DISCUSSION

Our study shows a significant undertreatment of primary headaches in Brazil. In average more than 90% of those in need of preventive treatment are not getting appropriate treatment. Migraine showed the highest rates of both prevalence and impact.

Migraine and probable migraine patients in need for prevention, together, accounted for a total of 8.4% of the Brazilian population. It is a major public health issue that should be dealt with. However, no public health policy is current available for the management of migraine disorders in Brazil. Interestingly probable migraine had a higher rate for preventive treatment compared to migraine.

We used MIDAS higher than 10 as a criteria for prevention treatment need. We choose this arbitrary cut point in order to meet not only a minimum of headache frequency but also headaches with a certain impact. Considering MIDAS refers to 3 months, eleven points would translate into three headache days with at least 50% of disability. Most of the migraine prophylaxis consensus worldwide suggest start a medication or intervention with 2 or 3 attacks per month. We think the measure chosen here is better than just headache frequency.

Migraine undertreatment is also present in other countries. The AMPP study<sup>7</sup> showed that 25.7% of migraineurs needed prevention, compared to 24.7% found in our study. Only 13.0% of sufferers in the US were taking daily preventive medication, but in our sample, a lot less (2.6%) patients were on prophylaxis.

The national French migraine study (FRAMIG 2000)<sup>8</sup> found that only 6% of migraine sufferers actually took a true prophylactic treatment, and another 4% mistakenly considered the analgesics they took daily as prophylactic treatments.

Improve the rate of migraine prevention is one of the most important challenges in neurological practice, public health initiatives should be focus this issue.

## CONCLUSION

Migraine and tension-type headache are common, severe, debilitating neurological conditions but a substantial proportion of those who might need prevention do not receive it.

Patient education, public health initiatives in order to deliver migraine and other primary headaches treatment for the general population, as well as continuing medical education in all levels (medical school, residency, internal medicine, family medicine, gynecology, pediatrics, neurology) should be considered not only in Brazil, but worldwide.

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