

Prevalence of headaches in individuals referred from primary care to secondary care

Prevalência de cefaleia em indivíduos encaminhados da atenção primária para a secundária

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Rodrigues JM, Caires VV, Fontoura KB, Silva TC, Goulart SF, Rocha CM, Teixeira AL, Silva Junior AA
Prevalence of headaches in individuals referred from primary care to
secondary care. *Headache Medicine*. 2011;2(4):200-3

ABSTRACT

Background: Improve the quality of public health is a growing necessity today. Identifying reasons for medical referral (from general to specialized care) is a prelude for developing educational initiatives that have this goal. **Objective:** To estimate the prevalence of headaches as a cause of referral from the primary to the secondary level of public medical care. **Methods:** First-time referrals from four primary care units to neurology care were assessed. **Results:** Sample consisted of 587 individuals referred to neurology consultation. Headache was the cause of referral in 31.2% of the individuals; 79.2% of the headache cases were in women. Rates for other diseases were lower and are presented for benchmarking. **Conclusion:** Headache represented an important cause of demand for neurological care. Education initiatives on principles of headache management are necessary and may translate into decreased referral rates to neurologists.

Keywords: Headache; Primary health care; Secondary health care

RESUMO

Introdução: Melhorar a qualidade da saúde pública é uma necessidade crescente nos dias atuais. Identificar os motivos de encaminhamento médico (da atenção generalista para a especializada) é um prelúdio para o desenvolvimento de iniciativas educacionais que tenham este objetivo. **Objetivo:** Estimar a prevalência de cefaleias como causa de encaminhamento do nível primário para o secundário, de assistência médica, na saúde pública. **Métodos:** Num primeiro mo-

mento, os encaminhamentos de quatro unidades de atenção primária para a atenção neurológica foram avaliados. **Resultados:** A amostra consistiu em 587 indivíduos referenciados para consulta em neurologia. Cefaleia respondeu por 31,2%; 79,2% dos casos de cefaleia foram em mulheres. As porcentagens de outros motivos de atendimento foram mais baixas e são apresentadas para comparação. **Conclusão:** Iniciativas educacionais voltadas para o manejo das cefaleias são necessárias e podem resultar na diminuição das taxas de encaminhamento para neurologistas.

Palavras-chave: Dor; Cefaleia; Ocitocina; Síndrome do túnel do carpo

INTRODUCTION

The Brazilian Public Health System (PHS) provides universal medical access to the population. It is structured in three levels of care. The primary care consists of basic health units (BHUs), being the typical "entry door" into the system.⁽¹⁾ It accounts for the preventive care, as well as for treatment (by family physicians or general practitioners). An important component of the primary care in the PHS is the family health program (FHP), which mainly focuses on preventive and educational health strategies. A recent study demonstrated that 85% of the families seeking medical care in the PHS do it so through the FHP,⁽²⁾ which is largely

responsible for referrals to the secondary level of care. The secondary care consists of specialty clinics, and patients are to be referred by the primary care doctors into this level.⁽²⁾ The tertiary care consists of subspecialty and high complexity hospitals. It has been suggested that a considerable proportion of referrals to the secondary neurological care is due to headaches.⁽³⁾

The Brazilian PHS follows the structural recommendations of the World Health Organization (WHO) to the BRIC countries (Brazil, Russia India and China).^(4,5) The system seems to be effective in providing primary care,⁽⁶⁾ and important successes are reported in the control of diabetes and hypertension.^(7,8) Nonetheless, headaches have not deserved specific recommendations from a public health perspective.⁽⁹⁾ As a consequence, unnecessary referrals to the secondary care may exist.⁽¹⁰⁻¹²⁾ The problem is further amplified by the recognized difficulties in establishing a headache diagnosis at the primary care level.^(13,14)

In the present study was assessed the prevalence of headaches among patients referred from the primary care system to a secondary neurology program.

METHODS

This study was conducted at subdistrict north of Belo Horizonte, the capital of Minas Gerais state, Brazil. Through the FHP, this subdistrict attends 193,764 inhabitants. It is structured into 19 primary care centers and one secondary unit as main referral.

Patients should first be attended by general practitioners. Patients in need of neurological care are

referred to secondary care units. Accordingly, in this study we assessed reasons for referral from four primary care units that can only refer patients to a secondary care center.

The study was conducted from January of 2007 to September of 2009. For referred patients we collected demographic variables (gender, age) and reasons for referral as follows: headache, epilepsy, fainting, Alzheimer's disease, dementia or other memory problems, Parkinson's disease and tremors, strokes, and other causes. We restricted our analyses to adults (17 or older).

Extracted data were entered into Epiinfo (version 3.5.1) and description of results was performed.

The study was approved by the Ethics Committee of the University of José do Rosário Vellano (CEP/Unifenas) and the Ethics Committee on Public Health Research, Belo Horizonte (CEP/SMSA/BH).

RESULTS

Of 587 referrals, 183 were secondary to headaches. Accordingly, headaches responded by 31.2% of the referrals. Of headache patients, 79.2% were women with a mean age of 40 years (SD= 2).

Other causes of referrals are described in Table 1. The second most common cause of referral was epilepsy and related syndromes (14.9%) followed by fainting (5.6%) and Alzheimer's disease and memory problems (5.3%). With regard to median age stratified by category the average age was 38.5 years in epilepsy followed by 53 years for fainting and 72 years for Parkinson's disease. This information can be seen in Table 2.

Category	Gender				Total	%
	Men		Women			
	n	%	n	%		
Headache	38	20.8%	145	79.2%	183	31.2
Epilepsy and related syndromes	45	51.1%	43	48.9%	88	14.9
Fainting	10	30.3%	23	69.7%	33	5.6
Parkinson's disease and Tremors	8	36.4%	14	63.6%	22	3.7
Alzheimer's disease and memory problems	7	22.6%	24	77.4%	31	5.3
Stroke	9	52.9%	8	47.1%	17	2.9
Others*	83	42.6%	112	57.4%	195	33.2
Unknown	9	50.0%	9	50.0%	18	3.0
Total	209		378		587	100

*Include: regional pain syndromes, polineuropathies, carpal tunnel syndrome and others.

Category	Minimum	Median	Maximum
Headache	17.0	39.0	73.0
Epilepsy and related syndromes	18.0	38.5	75.0
Fainting	18.0	53.0	92.0
Parkinson's disease and Tremors	36.0	72.0	90.0
Alzheimer's disease and memory problems	38.0	72.0	86.0
Stroke	27.0	56.0	85.0
Others*	18.0	50.0	87.0
Unknown	19.0	51.0	76.0

*Include: regional pain syndromes, polineuropathias, carpal tunnel syndrome and others

DISCUSSION

Headache was the main cause of referrals for neurological care. With regard to age, headache and epilepsy were the most frequent among young adults and Alzheimer's disease and Parkinson's disease affected more the elderly.

These results come at little surprise, since findings are supported by the literature which suggests that headache responds for around one third of referrals to neurological care.⁽³⁾ The relative frequency of referrals due to headaches is particularly expressive when contrasted to other reasons. For instance, epilepsy responded to less than half of the headache referrals. Parkinson's disease responded by only 3.7%.

The expressive frequency of referrals due to headaches has several potential explanations. First, the prevalence of headaches in the population is far higher than the prevalence of other neurological disorders. However, since headaches are diagnosed based on clinical grounds and are benign in most cases, this fact alone unlikely explains the high proportion of referrals. According to Galdino et al.,⁽¹⁴⁾ the lack of dissemination of diagnostic criteria for headaches among primary care doctors is associated with reduced comfort in assigning headache diagnoses and may explain the referrals.⁽¹⁵⁾ Indeed, according to Vincent and Carvalho,⁽¹⁶⁾ only 44.9% of the migraine cases seen by primary care doctor in Brazil received a proper diagnosis.

Our study has clear limitations. The most important is the lack of specific headache diagnoses, since we relied on information obtained from the referral letters. Second, our data may not be generalizable to other regions. We aim to repeat this study after these educational initiatives are conducted, in order to test the hypothesis that referral rates will be reduced.

Accordingly, we demonstrated that high proportion referrals to neurological cares are due to headaches in the PHS. This may reflect the high prevalence of headaches in the population, but also the ineffectiveness of the primary care system in dealing with headaches. Educational initiatives are to be created and tested in order to change this paradigm.

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Received: 1/30/2011

Accepted: 11/25/2011

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