



ORIGINAL ARTICLES

Teaching needs of general practitioners in headaches

J. Pascual^{a,*}, A. Sánchez-Escudero^b and J. Castillo^c

^a Centro Servicio de Neurología, Hospital Universitario Marqués de Valdecilla, Santander, Spain

^b Centro de Salud de Peñaranda de Bracamonte, Peñaranda de Bracamonte, Salamanca, Spain

^c Centro de Salud de Camargo, Camargo, Cantabria, Spain

Received on 22nd October 2009; accepted on 21st December 2009

KEYWORDS

Migraine;
Primary care;
Tension-type headache

Abstract

Background and objective: Headache in general, and migraine in particular, are the main reasons for general practitioners (GPs) to consult neurology services. Our aim was to analyse the current knowledge of GPs in migraine diagnosis.

Patients and method: Unselected GPs from two provinces in Spain were asked to diagnose and treat a fictitious clinical patient who met all International Headache Society criteria for a diagnosis of migraine without aura (5-6 episodes/month), with the only difficulty of a bilateral pain location. The test was anonymous and was given with no previous advice. They were asked to answer in 5-10 min to mimic normal clinical practice.

Results: Of the 105 GPs who were consulted, 46 (44%) diagnosed migraine correctly, 41 (39%) diagnosed the patient as tension-type headache, 17 (16%) as "mixed" headache and one GP was unable to diagnose the patient. With only two exceptions, all recommended NSAIDs as symptomatic treatment. Triptans were recommended by 67 GPs (including 15 out of the 41 who had diagnosed the patient as tension-type headache). Preventive treatment was not considered by 30 GPs. A total of 66 GPs would prescribe beta-blockers (13 out of the 41 giving the diagnosis of tension-type headache), 35 amitriptyline (23 of those who had diagnosed as tension-type headache) and the remaining 9 other treatments.

Conclusions: More than half of the GPs made diagnostic mistakes and more than one-third treatment mistakes. In conclusion, there is a need for better teaching in primary headaches and specifically in the diagnosis and treatment of migraine, the primary reason for neurological consultation by GPs.

© 2009 Sociedad Española de Neurología. Published by Elsevier España, S.L. All rights reserved.

* Author for correspondence.

E-mail: juliopascual@telefonica.net (J. Pascual).

PALABRAS CLAVE

Cefalea de tensión;
Migraña;
Atención primaria

Necesidades de formación del médico de atención primaria en cefaleas**Resumen**

Fundamento y objetivo: La cefalea en general, y particularmente la migraña, es el principal motivo por el que el médico de atención primaria (MAP) deriva a consultas especializadas de neurología. Nuestro objetivo fue analizar la formación práctica real del MAP en el diagnóstico de la migraña.

Pacientes y método: Se solicitó a MAP no seleccionados de Cantabria y Salamanca que diagnosticaran y trataran un caso clínico que cumplía todos los criterios de la International Headache Society para el diagnóstico de migraña sin aura (5-6 episodios/mes), con la única dificultad de que el dolor tenía una localización bilateral. La encuesta era anónima y fue entregada sin aviso previo. Se les pidió que contestaran en 5-10 min como máximo, de cara a remedar las condiciones reales de práctica clínica diaria.

Resultados: De los 105 MAP consultados, 46 (44%) diagnosticaron migraña correctamente, 41 (39%) diagnosticaron el supuesto clínico como cefalea tensional, 17 (16%) como cefalea "mixta" y uno fue incapaz de emitir un diagnóstico. Con dos excepciones, todos recomendaron antiinflamatorios no esteroideos como tratamiento sintomático. Los triptanes fueron recomendados por 67 MAP (entre ellos, 15 de los 41 que habían diagnosticado a la paciente de cefalea tensional). En cuanto al tratamiento preventivo, 30 MAP no lo contemplaron. Un total de 66 MAP eligieron bloqueadores beta (entre ellos, 13 de los 41 que habían sostenido el diagnóstico de cefalea tensional); 35, amitriptilina (23 de los que diagnosticaron cefalea tensional), y los 9 restantes, otros tratamientos.

Conclusiones: Más de la mitad de los MAP cometieron errores de diagnóstico y más de un tercio, de tratamiento. En síntesis, es necesaria una mayor formación en cefaleas primarias y, en concreto, en el diagnóstico y el tratamiento de la migraña, la primera causa de consulta neurológica para los MAP.

© 2009 Sociedad Española de Neurología. Publicado por Elsevier España, S.L. Todos los derechos reservados.

Introduction

Headache is the most frequent reason for neurological consultation with the general practitioner (GP). Among patients complaining of headache to a GP, more than 90% did so for one of the primary headaches. Although the prevalence of tension-type headache is greater than that of migraine, in terms of frequency of consultation with the GP, that of migraine is significantly higher than that of tension-type headache¹.

With respect to neurology specialist consultations, various studies in our environment confirm that headache is the main reason for referral from primary healthcare^{2,3}. Up to 25% of new consultations in neurology outpatient services are due to headaches. Once again, migraine is the most frequent diagnosis in these patients. Although there are no regulated studies in this regard, many of these patients are still referred due to or with diagnostic doubts. Furthermore, treatment for migraine in primary care is clearly inadequate. To give only two examples, less than 10% of patients with migraine receive triptans in our country and less than 5% of patients referred from primary healthcare with a migraine crisis receive preventive treatment, although it is known that at least a fourth (ideally half) should have received preventive medication⁴.

To assess the practical diagnostic and therapeutic situation of primary headaches and, specifically, of migraine

in our country, we conducted this study on the approaches taken by group of GPs towards a clinical case under conditions that mimicked those of everyday clinical practice.

Patients and method

Various GPs were asked to diagnose and propose a complete treatment for the clinical case (table 1) of a patient with headache who fully met the standard criteria of the International Headache Society (IHS) for migraine without aura⁵. The only diagnostic difficulty was pain with a bilateral location, which is a non-exclusive criterion for the diagnosis of migraine; in fact, it is the least sensitive criterion for this diagnosis, since the typical hemicranial location only appears in half of cases. The patient had an average frequency of episodes (5-6/month) well above that recommended for the start of preventive treatment (from 3 episodes per month). The GPs who took part in the survey worked in health centres in Cantabria and Salamanca (divided at 50%). At each of the centres, 3-5 GPs who were not selected (they had no specific dedication to headache) and who had no preparation or warning were asked to give a reply to the clinical case. In order to mimic the conditions of daily clinical practice, they were given a maximum time of 10 min to answer the questions about the clinical case.

Table 1 Practical scenario

Woman, 34 years old, with a history of 15 years of evolution of headaches with a frequency of approximately 5-6 episodes per month that last from 1 to 4 days, generally with bilateral location (in both temples). The headaches are sometimes oppressive, sometimes throbbing, with moderate photophobia and dubious phonophobia, which occasionally forces her to lie down for a while. The headaches are not accompanied by vomiting — only occasionally by nausea — or visual symptoms

Your diagnosis would be:

State the (complete) drug treatment that you would establish for this patient

Results

A total of 105 GPs agreed to answer the clinical case. Of these, 46 (44%) correctly diagnosed the patient with migraine; 41 (39%) diagnosed the clinical case as tension-type headache; 17 (16%), as a “mixed” headache; and one was unable to offer a diagnosis. We found no differences in results by province or GP experience.

With two exceptions, all recommended non-steroidal anti-inflammatory drugs (NSAIDs) as symptomatic treatment and 67 GPs recommended triptans, always as an option in conjunction with NSAIDs. Interestingly, 15 of the 41 GPs who had diagnosed the patient with pure tension-type headache recommended triptans; 11 GPs also recommended painkillers, such as paracetamol or metamizole; 2, ergotic drugs, and 2, opiates, as symptomatic treatment.

With regard to preventive treatment, 30 GPs did not contemplate it. Of the 75 GPs who indicated preventive treatment, 66 selected beta blockers (including 13 of the 41 who had supported the diagnosis of tension-type headache); 35, amitriptyline (23 of those who diagnosed tension-type headache), and the rest, other treatments: 14, flunarizine; 7, muscle relaxants, and 1, valproic acid.

Discussion

As for the diagnostic approach, just over half (56%) of the GPs surveyed made some mistake. While in 16% the diagnosis of mixed headache (migraine + tension-type headache) could be considered as not mistaken, almost 4 in 10 GPs issued a misdiagnosis, given that they considered only the possibility that the alleged patient suffered a tension-type headache. These results are not at all surprising, considering that when patients diagnosed with tension-type headache by a GP are reviewed by a neurologist, the diagnosis is reclassified as migraine in a high percentage of cases⁶. There could be several potential causes for such migraine underdiagnosis by our GPs. First, the epidemiological data that the prevalence in the population of tension-type headache is clearly higher than that of migraine certainly

predisposes the GP to consider the diagnosis of the theoretically more frequent entity in the first place, even though in terms of consultation the frequency of migraine is well above that of tension-type headache, since migraine generates a much higher degree of disability in daily life activities. Second, we believe that the underdiagnosis of migraine may be an indirect consequence of the appearance of the IHS criteria. These criteria are extremely useful in clinical trials. However, they are likely to be complex for the GPs, who tend to think that patients with migraines have to meet all the diagnostic items and are not aware, for example, of the diagnostic possibility of probable migraine. In this sense, much of the blame probably lies not only with the GP, but with the neurology specialist who has been unable to convey this diagnostic flexibility to the GP in their educational encounters. At any rate, these results clearly show that GPs have to be more involved in obtaining better knowledge of the diagnosis of primary headaches and, more specifically, of migraine.

With regard to treatment, there are some very illustrative aspects worthy of comment. In the field of symptomatic treatment, all GPs recommended NSAIDs, which is in accordance with the current recommendations⁷⁻⁹. Two-thirds recommended triptans, which is also correct, since these drugs are considered the treatment of choice for patients (such as the present one) with moderate-severe migraine crises. It is striking, however, that more than one-third of the GPs surveyed who diagnosed the patient with tension-type headache prescribed triptans, when it is known that these drugs are not useful in this indication. This probably reflects their diagnostic doubts and personal clinical experience; they had probably seen patients similar to the one in the survey in their daily practice, and would have diagnosed them with tension-type headache that responded to triptans. Only 15 GPs recommended simple or compound (ergot or opioids) analgesics as symptomatic treatment; this confirms that the message that these drugs should be avoided, as potentially headache-inducing and possibly causing chronic migraine, has reached most primary healthcare professionals.

With regard to preventive treatment, the most striking fact is that almost one-third of GPs surveyed did not consider it. Preventive migraine treatment remains one of the outstanding subjects in our environment, not only for the generalist, but also for the neurology specialist. Most of the GPs surveyed chose beta blockers that, according to current recommendations, would be the choice for this patient, or amitriptyline. Contrary to what might be thought, one-third of the GPs surveyed who diagnosed the patient with tension-type headache would have prescribed beta-blockers, while a third of those who emitted a diagnosis of migraine would have chosen amitriptyline. Therefore, joining those who would not have prescribed preventive treatment for the patient and those who made erroneous indications, about half of the GPs surveyed incurred in errors with regard to preventive treatment^{7,8}. Another striking fact is the limited recommendation of flunarizine, which confirms that this is a drug whose popularity is in sharp decline.

In a study carried out among GPs in our country on various aspects related to headaches, mainly training needs in diagnosis and treatment, it was determined that both

migraines and chronic headaches are the main objective⁹. As a result of this and other studies, the various scientific societies in both neurology (*SEN*, Spanish Neurological Society) and primary care (*SEMFyC*, Spanish Society of Family and Community Physicians; *SEMERGEN*, Spanish Society of Primary Care Physicians; *SEMG*, Spanish Society of General and Family Physicians) have developed numerous teaching activities and diagnostic and therapeutic guidelines, the results of which have been evaluated on very few occasions^{7,8}. All these data indicate that new efforts and teaching strategies remain to be developed, for GPs, both for diagnostic approach and for treatment, in relation to the major primary headaches, mainly migraine.

Conflict of interests

The authors declare no conflict of interests.

References

1. Quintela E, Castillo J, Muñoz P, Pascual J. Diagnostic distribution of headache patients in primary care in Spain. *Cephalalgia*. 2007;27:673.
2. Pascual J, Combarros O, Leno C, Polo JM, Rebollo M, Berciano J. Distribución por diagnósticos del dolor de cabeza como motivo de consulta neurológica. *Med Clin (Barc)*. 1995;104:161-4.
3. Gracia-Naya M, Alarcia-Alejos R, Modrego-Pardo PJ. Importancia de la migraña crónica en un servicio de neurología general. *Rev Neurol*. 2008;46:577-81.
4. Mateos V, Díaz-Insa SI, Morera J, Porta J, Pascual J, Matías-Guiu J. Manejo de la migraña en las consultas de neurología en España: resultados del programa PALM. *Neurología*. 2007;3 Supl 4:7-14.
5. Headache Classification Subcommittee of the International Headache Society. The International Classification of Headache Disorders. 2nd edition. *Cephalalgia*. 2004;24 Suppl 1:9-160.
6. Tepper SJ, Dahlof CG, Dowson A, Newman L, Mansbach H, Jones M, et al. Prevalence and diagnosis of migraine in patients consulting their physicians with a complaint of headache: data from the Landmark Study. *Headache*. 2004;44:856-64.
7. Pascual J, Aguirre J, García-Moncó JC, Seijo M. Migraña y cefalea de tensión. In: Mateos V, editor. *Guías para el diagnóstico y tratamiento de las cefaleas*. Barcelona: Prous; 2006. p. 37-66.
8. Laínez JM, Castillo J, González VM, Otero M, Mateos V, Leira R, et al. Guía de recomendaciones para el tratamiento de la migraña en la práctica clínica. *Rev Clin Esp*. 2007;207:190-3.
9. Martínez JM, Calero S, García ML, Tranche S, Castillo J, Pérez I. Actitud de los médicos de atención primaria españoles ante la cefalea. *Aten Primaria*. 2006;38:33-8.