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Study on management of headache by general practitioners in South Italy

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Abstract The impact of migraine headaches is one of the major public health problems in several industrialised countries, with many patients reporting frequent and significant disability. Previous studies have assessed general practitioners' (GPs) perceptions towards evidence-based medicine (EBM) and its influence on health care decisions. Of 500 questionnaires distributed, responses were received from 455 for a response rate of 91%. Respondents' awareness of technical terms used in EBM indicated that only 27.2% of GPs agreed that clinical trials are needed

to evaluate the efficacy of treatments and this awareness was higher in those who learned about migraine from scientific journals or continuing education courses and who attended courses on epidemiology or EBM. Training and continuing educational programmes on EBM and guidelines in terms of treatments of headache for GPs are strongly needed.

Key words Evidence-based medicine • General practitioners • South Italy • Migraine

Introduction

Evidence-based medicine (EBM) promotes the use of current best evidence in making decisions about the health care of individual patients. Its practice means integrating individual clinical expertise with clinical evidence from systematic research and its main principle is that clinical decisions should be based on the best available scientific evidence of previous experience and the conclusions based on such evidence should stimulate quality improvements in patient care [1, 2]. However, it should be noted that in several areas of the medical sciences the lack of good evidence for clinical decision-making remains an issue and the availability of good evidence does not nec-

essarily get applied to patient care [3]. Moreover, as clinicians deal with patients, there is a continuing increase in the need for clinical information, but for many reasons clinicians often do not obtain that vital evidence.

Previous studies have assessed general practitioners' (GPs) perceptions of EBM and its influence on health care decisions [8–10], but to the best of our knowledge no information is available about its evaluation on migraine and information on this topic is needed because patients with migraine headaches often present family physicians with diagnostic and therapeutic challenges. Therefore, the purpose of the present study is to identify if GPs in Italy are aware of technical terms used in EBM and what their behaviour is in terms of treating patients with migraine.

Material and methods

During the period October to December 2002, a survey was conducted on a random sample of 500 GPs in Calabria (Italy). All the GPs sampled were invited to participate by a letter emphasising the importance of the study, an anonymous self-administered questionnaire, and a pre-addressed envelope to facilitate the return of the complete questionnaire. Informed written consent for their participation was obtained and confidentiality of responses was assured.

The questionnaire included questions focusing on GPs' demographics and practice characteristics; their awareness of technical terms used in EBM; main sources of information about migraine and EBM; and their behaviours in terms of eventual treatment.

Responses concerning awareness of EBM were based on a three-point Likert scale with options for "agree", "uncertain" and "disagree"; whereas four responses for behaviour were in a "yes/no" format.

Results

Of 500 questionnaires distributed, responses were received from 455 for a response rate of 91%. The mean age of the sample of GPs was 49.9 years (range 36–70 years), more than three-quarters were males, the mean duration of work activity as a GP was 17 years, and they provided care to a mean number of 17 patients with migraine in a month.

Respondents' awareness of technical terms used in EBM is presented. A broad level of awareness was lacking, as only 27.2% of GPs agreed that clinical trials are needed to evaluate the efficacy of preventive or curative treatments and 47.6% agreed that relative risk and odds ratio are measures used in clinical trials to establish whether a specific treatment is efficacious. However, a considerable proportion (71.8%) agreed that meta-analysis uses statistical methods to combine the results of previous studies in order to provide a quantitative and cumulative summary of the overall treatment effect. Three-quarters of GPs agreed that the migraines' clinical approach required an effectiveness evaluation by performing controlled clinical trials. The respondents' behaviour about EBM and headache patients' management was reported. Regarding behaviour in clinical practice, the vast majority of the respondents (93.1%) indicated that it is important that the skills needed to provide a solution to a clinical dilemma should imply the integration between the clinical practice and the best evidence available. However, this is in contrast with the result that when scientific evidence indicates that a current treatment is less efficacious or more expensive than the new treatment, respectively only 14% and 3.1% of GPs would modify the

treatment. Half of the sample would prescribe diagnostic procedures like as encephalic computed tomography (CT) and magnetic resonance imaging (MRI) with the advice of a neurologist. Among all variables tested, only female sex significantly predicted appropriate use of that particular diagnostic procedure (OR=0.55; 95% CI=0.32–0.93; $p=0.025$). For two-thirds of the sample (65.5%), disability in headache patients is equivalent to illness diagnosis, and regression analysis showed that this behaviour was significantly more likely in those GPs who agreed that clinical trials are needed to evaluate the efficacy of preventive or curative treatments of migraine (OR=0.46; 95% CI=0.27–0.78; $p=0.004$) and that the migraine's clinical approach required a clinical effectiveness evaluation by performing controlled clinical trials (OR=1.99; 95% CI=1.23–3.24; $p=0.005$), in those who treated a lower number of headache patients in a month (OR=0.99; 95% CI=0.9997–0.99995; $p=0.006$), who were older (OR=1.36; 95% CI=1.07–1.74; $p=0.012$), and who used guidelines about treating migraine (OR=0.55; 95% CI=0.32–0.96; $p=0.036$).

Discussion

Migraine remains a common disorder, which is underdiagnosed and undertreated and its care has the potential to improve greatly with the development of new management guidelines, the introduction of new treatments, and the use of EBM tools to objectively rate and compare available therapies.

In the past decade few studies have analysed the impact of clinical practice guidelines and EBM among GPs [8, 10, 12]. Some reviews have suggested headache evidence-based diagnostic and therapy evaluation [5, 7] and optimal strategy for managing acute headache [4, 6, 7]. Others have proposed revisions of diagnostic criteria for chronic daily headache [11]. This study represents the first investigation of awareness of technical terms used in EBM and explicit presentation of evidence within guidelines and yielded a comprehensive picture of the behaviour in terms of the treatment of patients with headache among GPs.

Despite an overall positive attitude toward evidence-based diagnostic, the GPs participating in this study were not aware that guidelines were the most favoured approach for moving from opinion-based medicine to EBM. Less than half (46.7%) of the GPs modify the treatment when and if new scientific evidence indicates that its use on a patient is less efficacious than the new one. Recommendations to change practice should take prior beliefs of GPs into account. The results of our study indi-

cate a lack of GPs awareness, because only 27.2% and 26.5% respectively agreed that clinical trials are needed to evaluate the efficacy of preventive or curative treatment and that health economic evaluation is useful in prescribing treatment that should be less expensive but with similar efficacy. Published sources of guidance are used, since respectively 61.7% and 17.9% of the respondents indicated scientific journals and medical association guidelines as additional sources of information on headache issue. Despite the major advances achieved in headache diagnosis and treatment, primary care physicians still face major challenges in making the correct diagnosis and selecting the most appropriate treatment for this common, disabling condition. Improving communication between patients and physicians will help to achieve better outcomes in terms of recognition of headache severity and treatment needs. Continuing education and raising awareness of the impact of headache will help to overcome barriers to headache care and improve headache management. As already stated, we found that attending courses on epidemiology or EBM was significantly associated with awareness of usefulness of clinical trials and cost-benefits analysis in headache management. Following assessment and diagnosis, most patients with disabling migraine can be treated effectively using a triptan.

Accessing and interpreting evidence to answer clinical questions is not such a straightforward issue, especially in

primary care. When GPs do access the literature to find evidence about clinical problems, they should be aware of certain limitations, for example the applicability of the available medical evidence to general practice, as much of the information is not obtained from primary care. Moreover, what GPs read is influenced by the bias and experience they bring from their own practice. There are biases in implementing research findings in clinical practice, deriving mostly from peer influences rather than the research evidence itself. Practising EBM to incorporate best external evidence with clinical expertise, clinicians and in particular GPs need to learn how to use tools that allow them to find, critically appraise and apply the evidence to their patients. A prerequisite is the recognition that there are knowledge gaps that need to be filled. Direct examination of the evidence from clinical research in headache management is important for several reasons. First, the practice of neurology has shifted from a rich, descriptive discipline to one of increasing diagnostic and therapeutic interventions. Second, clinicians face growing pressure to support their decisions with solid evidence. Third, we are inundated with information and we are slow to keep up. EBM allows clinicians to tap directly into clinical research results, assess their validity and usefulness, and keep up-to-date.

In conclusion, additional training and continuing educational programmes on guidelines in terms of treatments of headache for GPs are strongly needed.

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