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Understanding the Needs of Migraine Patients

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Abstract

Although migraine is a highly disabling disorder, it remains underdiagnosed. Its relevance is often minimized by both patients and physicians, and the presence of concomitant diseases such as depression can interfere with diagnosis. Migraine is often inappropriately treated by patients who often self-administer over-the-counter analgesics or do not follow physician prescriptions, and by physicians who do not always prescribe migraine-specific treatments when they are indicated. These factors can lead to patient dissatisfaction with migraine therapy. Surveys show that migraine patients consider complete pain relief to be the most important attribute of an acute migraine treatment. Other important attributes are rapid onset, lack of recurrence, restoration of function, and the absence of side-effects.

Medical professionals treating migraine need up-to-date clinical information to diagnose this disorder effectively, to understand the breadth of treatments available, and to choose the most appropriate treatment. Physician–patient communication is also a key factor in migraine management and allows physicians to gain the trust of their patients. Educating patients about migraine and involving them in treatment decisions are likely to improve patient satisfaction with therapy. Education and involvement will also help patients to understand their disorder better, to identify and avoid migraine triggers, and to improve their understanding of and compliance with drug therapy. Such an approach may also help physicians to manage patient expectations.

1. Introduction

Migraine is a common condition with an estimated prevalence in western societies of approximately 11%.[1] Migraine prevalence is age specific as well as sex specific, as shown in figure 1 from the American Migraine Study II, a detailed epidemiological study conducted in the United States in 1999. Overall, 18.2% of women and 6.3% of men suffered from migraine.[2]

The disability associated with migraine is sizeable. In the American Migraine Study II, 31% of migraineurs reported missing at least one day of work or school in the previous 3 months because of migraine, and 51% reported that during migraine, their work or school productivity was reduced by 50%.[2] The Global Burden of Disease study ranked the disability associated with a severe attack of migraine similarly to that for quadriplegia.[3] The impact of migraine-associated disability is compounded by the age-specific prevalence of

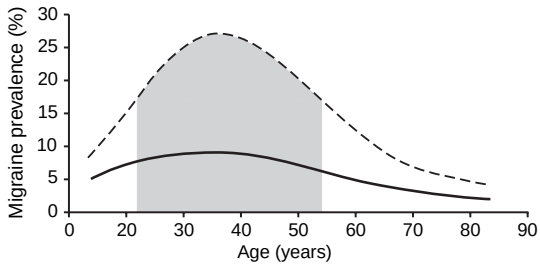

Fig. 1. Migraine prevalence according to age and sex from the American Migraine Study II.[2] ——— = Men; - - - - - = women.

this condition; it is most common during some of the most productive decades of migraineurs' lives (figure 1). For example, more than 25% of women in their forties experience migraine.[2]

Our knowledge of the pathophysiology of migraine has expanded over the past two decades,[4] enabling the development of the triptans, efficacious and well-tolerated specific agents for the acute treatment of migraine.[5–9] However, the treatment needs of many migraineurs are still not being met. This article will describe the problems we face in migraine management around the world, including low patient consultation rates and inadequate treatment. Data on patients' requirements for satisfaction with therapy will be discussed, and strategies for improving patient compliance and satisfaction will be explored.

2. Migraine Consultation

Despite the chronic and debilitating nature of migraine, many migraineurs do not consult with physicians, and many of those who do consult do not continue seeking medical care for migraine. We conducted an extensive telephone survey in Canada in 1989 and 1990, and obtained data on headache prevalence and characteristics among adults in 2905 households. Only approximately one third of the migraineurs interviewed in that survey were currently receiving medical attention for migraine. Almost half of the migraineurs had discontinued consultation for migraine, and approximately one fifth had never sought medical attention for the condition.[10]

A 1997 survey study conducted in Sweden found even lower rates for migraine consultation and ongoing medical care for migraine.[11] Data were obtained from 423 migraineurs originally identified by telephone, who returned a comprehensive postal questionnaire. Of these migraineurs, only 6% regularly consulted with a physician regarding migraine and 21% consulted occasionally. Twenty-nine per cent had stopped seeing a doctor for migraine, and 44% had never visited a physician because of their migraine.

Small survey studies conducted among migraineurs in France, the United Kingdom (UK), and the United States (USA) also revealed low rates of consultation for migraine and high rates of lapsing from migraine care (figure 2).[12,13] Finally, the Migraine and Zolmitriptan Evaluation (MAZE) survey, which assessed migraine prevalence and management in 5553 adults in France, Germany, Italy, the UK, and the USA, found that overall, 52% (range 41–63%) of patients with migraine did not consult a physician about migraine.[14]

These results suggest a universal pattern of poor levels of physician consultation for migraine, both for initial assessment and for the continuance of therapy. Economics does not appear to be driving this phenomenon, as these findings were observed

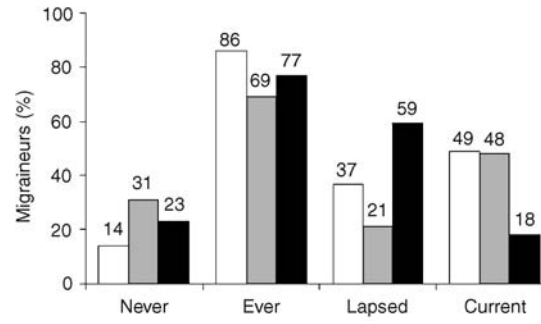

Fig. 2. Migraine consultation rates from parallel epidemiological studies conducted in the United States and the United Kingdom in 1998[12] and a separate epidemiological study conducted in France in 2000 (FRAMIG 2000).[13] □ = UK; ▒ = USA; ■ = France.

in countries with comprehensive government-subsidized healthcare programmes such as Sweden and Canada. Rather, these findings may reflect a low level of confidence on the part of patients regarding the ability of physicians to manage migraine. For example, 22% of migraineurs in the UK and 16% of those in the USA participating in a survey study agreed with the statement 'Nothing a physician can do' as part of their reasons for not consulting for migraine. In addition, although approximately half of the migraineurs who had lapsed from medical care in that survey did so for the reasons of 'Headaches less severe, frequent' and 'I found a treatment that works', other common reasons included 'Physician did not help me' (27% in both the UK and the USA) and 'Nothing a doctor can do' (26% UK, and 41% USA).[12] In the Swedish study,[11] patients were questioned regarding their contacts with physicians. Whereas approximately one third of patients were neutral regarding their physician's knowledge of migraine and information provided on different treatment options, 12% felt that their physician's knowledge of migraine was poor or very poor, and 33% believed the information given on different treatment options was poor or very poor.

3. Migraine Treatment Patterns

Although triptans are the most specific medical therapy for migraine and are considered more efficacious than ergots and non-specific agents such as analgesics and non-steroidal anti-inflammatory drugs (NSAID),[15,16] triptans are underutilized by migraineurs. The MAZE study provided the most comprehensive set of data on migraine treatment patterns. Triptan usage ranged from a high of 19% in the United States to a low of 3% in Italy (figure 3). The most commonly used agents were simple analgesics (22–54%) and NSAID (5–43%).[14]

The findings from MAZE were consistent with data obtained in the 1989 Canadian study of headache characteristics and prevalence, in which 91% of migraineurs reported using over-the-counter agents for migraine, and only 44% of migraineurs reported using prescription medications for migraine therapy. The American Migraine Study conducted in 1989 observed a similarly low level of prescription drug treatment for migraine (37%), and despite the introduction of several triptans during the following decade, the prescription therapy rate among migraineurs in the American Migraine Study II of 1999 had only risen slightly to 41%.[17]

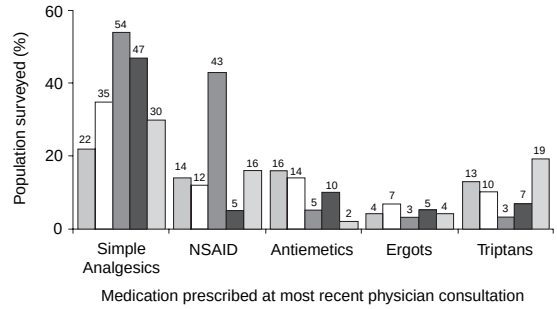

Fig. 3. Migraine treatment patterns in France, Germany, Italy, the United Kingdom, and the United States from the Migraine and Zolmitriptan Evaluation survey: medication prescribed for migraine at the most recent physician consultation.[14] **NSAID** = Non-steroidal anti-inflammatory drugs. □ = France; □ = Germany; ■ = Italy; ■ = UK; □ = USA.

4. What Do Patients Want From Acute Migraine Therapy?

To improve migraine consultation rates and minimize lapses from treatment, it is important to understand what migraineurs seek from their therapy. Several recent reports used efficacy and tolerability data, weighted for importance, in a multiattribute decision model to compare the profiles of the oral triptans.[18,19] Triptan-naive patients weighted efficacy as more important than tolerability and tolerability as more important than consistency; triptan-experienced patients gave similar importance weights to tolerability and consistency, which were both considered less important than efficacy. Within efficacy, both groups of migraineurs weighted pain free at 1 h the highest, followed by sustained pain free and then pain free at 2 h.

Two key reports have revealed a number of efficacy and tolerability attributes that are

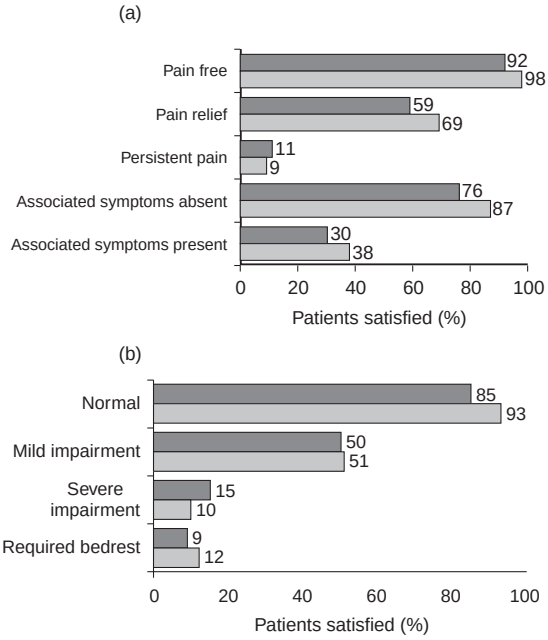

Fig. 4. Determinants of patient satisfaction with migraine treatment from a study of 1506 migraineurs enrolled in two clinical trials of rizatriptan. (a) Proportion of patients satisfied with treatment outcome according to status of headache pain and associated symptoms at 2 h; (b) proportion of patients satisfied with treatment outcome according to functional status at 2 h.[21] □ = Study 1 ($n = 407$); ■ = study 2 ($n = 1099$).

important to migraineurs. Their results may be used as a guide for physicians to initiate conversations with their patients regarding therapeutic goals.

The first study was a telephone interview survey of 688 migraineurs by Lipton and Stewart.[20] Complete relief of pain received the highest ranking, with 87% of respondents rating it as an important or very important attribute of acute migraine therapy. Other efficacy attributes ranked highly in this survey were no recurrence (86%), rapid onset (83%), and relief of associated symptoms (76%). The absence of side-effects was also important to the majority of respondents (79%).

In the second study, the influence of treatment outcomes on patient satisfaction was analysed using data from two clinical trials of rizatriptan that included a total of 1506 migraineurs.[21] Figure 4a shows patient satisfaction rates in the two trials according to treatment response at 2 h. Results from that analysis were consistent with those of the previous telephone survey by Lipton and Stewart.[20] Almost all of the patients who were pain free at 2 h reported satisfaction with treatment, whereas only approximately two-thirds who had pain relief (but were not pain free) at 2 h were satisfied. Efficacy for treating associated symptoms was also important to these patients, with approximately three-quarters of patients who had no associated symptoms at 2 h being satisfied with treatment. That study also revealed that restoring patients to normal functioning is a key factor in treatment satisfaction. Figure 4b shows patient satisfaction rates according to functional ability at 2 h. Nearly all of the patients who were able to function normally at 2 h were satisfied with treatment. Mild impairment had a dramatically negative impact on treatment satisfaction, with only half of the patients with this slight level of impairment at 2 h reporting satisfaction with treatment.

5. Establish a Definitive Diagnosis of Migraine

The first step to improving satisfaction with migraine treatment is to increase the rate of diagnosis among migraineurs. A definitive migraine diagnosis is necessary for a number of reasons. Many patients will be relieved to have other, more serious conditions such as a brain tumour ruled out. The patient may then be educated regarding migraine as a neurological condition, and the interaction between heredity as the basis for susceptibility and environment/lifestyle for triggering attacks. Finally, a definitive diagnosis makes it possible to choose appropriate therapeutic options.[22]

Several factors contribute to the underdiagnosis (and thus undertreatment) of migraine. Migraine is not sufficiently covered in medical school curricula, so primary care physicians need to educate themselves regarding migraine.[23] Consultations in primary care practice are

Table I. Simple migraine screening tools

	Lipton et al.[29]	Cady et al.[30]
Questions	1. Are you disabled by your headaches?	1. Do you have recurrent headaches that interfere with work, family, or social function?
	2. Are you nauseated by your headaches?	2. Do your headaches last for at least 4 h untreated?
	3. Are you sensitive to light with your headaches?	3. Have you had new or different headaches in the past 6 months?
Migraine diagnosis	A response of 'Yes' to all three questions suggests a diagnosis of migraine	A response of 'Yes' to questions 1 and 2 and a response of 'No' to question 3 suggests a diagnosis of migraine

necessarily too short, not allowing patients sufficient time in which to address all of their medical concerns.[24] Furthermore, patients tend to be reluctant to consult physicians regarding migraine for various reasons, including perceptions that their complaints will be dismissed as insignificant and that there are no effective treatments for them.[12–14]

Misinformation regarding migraine diagnosis is all too common among patients and non-neurologists. One misconception is that migraine does not occur without aura. In reality, only approximately 15% of migraineurs ever experience aura.[25] Another fallacy is that migraine is a woman's condition. Migraine is observed less frequently in men than in women, but given that approximately 6.5% of men in north America experience migraine,[2] a diagnosis of migraine in men who have headache and associated symptoms consistent with migraine should not be ruled out.

Two aspects of migraine are important for a differential diagnosis: the disabling nature of migraine and its frequency in the population. Migraine is all too often mistaken for tension-type headache,[26] particularly in patients with concomitant mood disorders (anxiety, depression). In fact, mood disorders and migraine are common comorbidities believed to have a shared aetiology in serotonergic pathways.[27] Although tension-type headache is common, it is not as disabling as migraine.[26] Other highly disabling headache types include cluster headaches and headaches secondary to a tumour or meningitis, but very few patients present with these conditions. The majority of headaches that impair function or cause a patient to consult a physician are migraines.[28]

The disabling nature of migraine is a key diagnostic feature in two recently developed three-question, valid and reliable migraine screens (table I). These simple questionnaires may facilitate migraine diagnosis by rapidly and easily identifying patients who may be experiencing migraines. According to the more rigorously validated questionnaire by Lipton et al.,[29] headaches associated with disability, nausea, and light sensitivity may be migraines. The questionnaire by Cady et al.[30] suggested that headaches interfering with work, family, or social functions and lasting for at least 4 h, but not new or different from headaches experienced in the preceding 6 months, are probably migraines.

When communicating the diagnosis of migraine to a patient, four points should be kept in mind. The first is clarity: the diagnosis (and subsequent treatment instructions) should be conveyed in a manner and at a technical level that is clear to the patient. The next point is relevance: the physician must understand the relevance of the diagnosis to the patient. The third point is sensitivity: the physician explaining the diagnosis must be sensitive to the patient's emotional state so that negative emotions do not interfere with the patient's understanding of the condition and its treatment. The final point is reinforcement: the diagnosis should be reinforced by repeating the information and by inviting the patient to ask questions.[22]

6. Establish Disability

The next step after diagnosis is to determine the extent to which the patient is disabled by migraine, because the disability level often guides the treatment of migraine. A study by Holmes et al.[31] illustrated this point. A total of 105 neurologists and primary care physicians based in north America ($n = 42$) and Europe ($n = 63$) participated in an interactive survey study involving treatment decisions for four migraineurs. They first viewed a videotape of the migraineur describing symptom history, and determined migraine severity and treatment strategies from that description. Then they viewed a second videotape made by a subset of the patients describing the disabling nature of the migraine, and made a second determination of severity and treatment taking into account the disability information. When disability data were available, the physicians were more likely to rate the patient's illness as severe or very severe, were more likely to recommend that treatment begin immediately with migraine-specific therapy, and were more likely to request a follow-up visit from the patient compared with when the disability information was absent (figure 5).

A number of tools are available for assessing migraine-associated disability. The Migraine Disability Assessment Questionnaire and the Headache Impact Test are two simple and brief scientifically validated questionnaires.[32–34] Other validated tools include the Brief 24-hour Quality of Life Migraine Specific Instrument Headache Impact Questionnaire, the Migraine-Specific Quality of Life Questionnaire, and the Medical Outcomes Study Headache Disability Inventory.[35–39] Assessment of disability using one of these or other such questionnaires, or your own set of simple questions, can help your patient accurately and comprehensively convey the type and level of disability and thus guide your treatment strategy.

7. Establish a Therapeutic Relationship

There are various types of physician/patient relationships; not all are optimal. In one scenario, the level of physician control is low and the level of that of the patient is high. In this situation, the patient may visit the doctor for the sole purpose of obtaining a specific prescription, and the patient's role is more like that of a consumer than of someone receiving medical treatment. In the opposite scenario, in which physician involvement is overly high and the patient's level of control is too low, the patient is assuming the role of a passive recipient.

The best working relationship between physician and patient occurs when both parties have high levels of interest and control. The key to this type of

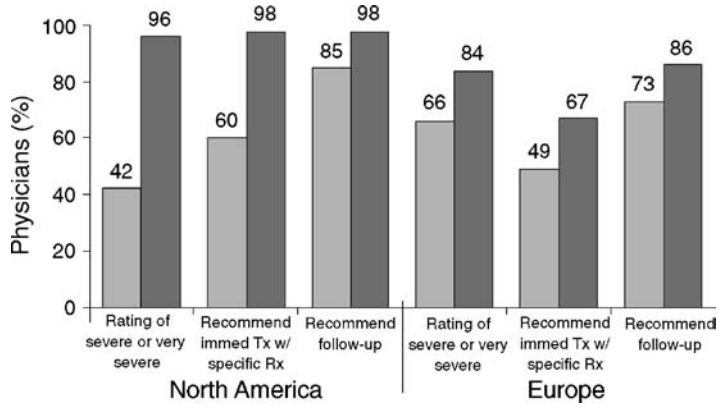

Fig. 5. Assessment of the influence of disability history on migraine treatment patterns by physicians (neurologists and primary care physicians) in North America and Europe.[31] **Rx** = prescription; **Tx** = treatment. □ = Without disability history; ■ = with disability history.

relationship is effective and efficient communication to promote a working partnership between the patient and the physician that enhances satisfaction on both sides.[40]

The physician should not assume that verbal instructions will be completely and accurately remembered by the patient after leaving the office. A number of aids can be provided to help the patient adhere to treatment regimens. Headache calendars and diaries will help patients recognize triggers for avoidance in the future,[41] and can help them to recognize the early symptoms of migraine thus enabling prompt treatment. A structured migraine diary can also be a valuable aid for improving communication between physicians and patients.[42] Instruction sheets can help guide patients regarding diet, exercise, and stress management to reduce the risk of attacks.

Physicians must also impart information beyond diagnosis and treatment options. It is important to listen and to validate the patient's disorder. Physicians should convey empathy for their condition and respect for their ability to persevere and succeed in educational, career and family goals despite this condition. Patients should be made to understand that they have control over their disease and can go on with their lives with minimal disruption from migraine. Physicians must manage patient expectations by explaining that there are gaps in our knowledge of migraine and differences of opinion among the experts, and that although all treatments are not effective all of the time, physicians will work as partners with patients to guide them in the best use of the most appropriate therapy.

8. Conclusions

Despite its widespread prevalence, migraine continues to be underdiagnosed. Even when diagnosed, migraine is often inappropriately treated both by patients, who often self-administer over-the-counter analgesics or do not follow physician prescriptions, and by physicians, who do not always prescribe migraine-specific treatments when they are indicated. Surveys show that migraine patients consider complete pain relief to be the most important attribute of an acute migraine treatment. Other important attributes are rapid onset, lack of recurrence, restoration of function, and the absence of side-effects. Medical professionals treating migraine need up-to-date clinical information to diagnose this disorder effectively, to understand the breadth of treatments available, and to choose the most appropriate treatment. Physician–patient communication is also a key factor in migraine management, and allows physicians to gain the trust of their patients. Educating patients about migraine and involving them in treatment decisions are likely to improve patient satisfaction with therapy. Education and involvement will also help patients to understand their disorder better, to identify and avoid migraine triggers, and to improve their understanding of and compliance with drug therapy. Such an approach may also help physicians to manage patient expectations. All of these factors are likely to improve patient satisfaction with therapy.

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