Management of Chronic Migraine

Migraine is one of the commonest neurological disorders, and yet remains relatively underdiagnosed and undertreated. The World Health Organisation considers a day with severe migraine to be as disabling as tetraplegia,[1] and estimates suggest that disability due to migraine costs over €27 billion per annum across Europe.[2] A significant minority of migraine sufferers go on to develop chronic headache; this group constitutes an estimated 2-3% of the general population.

Chronic migraine was introduced as a diagnostic subcategory of migraine in the second edition of the International Classification of Headache Disorders (ICHD-2),[3] and describes a chronic daily headache (by definition, occurring more than fifteen days per month), occurring in patients who have met the diagnostic criteria for migraine. The introduction of this classification prompted debate about the diagnostic criteria required in this (often complicated) patient group, which in turn has led to the publication of a revised set of criteria (Table 1). The term "chronic migraine" is a descriptive one, suggesting a significant ongoing headache burden, and is a useful standardisation for research purposes, but it should be recognised that it represents an arbitrary distinction. Patients with chronic migraine are often very significantly disabled by their headaches, form a significant part of general neurology and subspecialty headache practice, and constitute an ongoing therapeutic challenge.

By the time patients with chronic migraine reach neurology or headache clinics, their headaches may have been present for months, years or even decades. There may be a preceding history of episodic migraine, with or without aura, which gradually became more frequent over time. By the time such patients are seen at clinic, they have often been on a variety of medications and are often overusing acute therapies such as simple or compound analgesics and triptans. They may describe different headache types, not all with migrainous features, and tension-type headache and medication overuse headache may often coexist in such patients.

Table 1: Revised International Headache Society criteria for chronic migraine[8]

A. Headache (tension-type and/or migraine) on ≥15 days per month for at least 3 months
B. Occurring in a patient who has had at least five attacks fulfilling criteria for migraine without aura
C. On ≥ 8 days per month for at least 3 months headache has fulfilled C1 and/or C2 below, that is, has fulfilled criteria for pain and associated symptoms of migraine without aura *1. Has at least two of:* *(a) unilateral location* *(b) pulsating quality* *(c) moderate or severe pain intensity* *(d) aggravation by or causing avoidance of routine physical activity (e.g. walking or climbing stairs)* *and at least one of:* *(a) nausea and/or vomiting* *(b) photophobia and phonophobia* *2. Treated and relieved by triptan(s) or ergot before the expected development of C1 above*
D. No medication overuse and not attributed to another causative disorder

The first step towards effective treatment in chronic migraine is identification of factors which can contribute to headache chronicity, including medication overuse, co-administration of medications (such as nitrates) which may exacerbate migraine, and consideration of other medical factors (obstructive sleep apnoea, intracranial hyper- or hypotension or other causes of secondary headache) which may coexist. If there has been a recent or abrupt change in headache severity, character or pattern without apparent cause, consideration should always be given to the possibility of secondary headache.

Several studies[4,5,6] have identified factors including attack frequency, medication overuse, head injury, female sex, obesity, hypothyroidism, snoring, stressful life events and low socioeconomic status as risk factors associated with the progression from episodic to chronic migraine. These, of course, may not be causative, and no interventional studies have been carried out as yet to assess the effects of modifying these factors on headache chronicity. It has been shown, however, that obesity is not in itself associated with refractoriness to treatment.[7]

Although the ICHD criteria for chronic migraine specifically exclude concomitant medication overuse, in clinical practice the two frequently coexist. Patients who have found an analgesia regime that has worked well for previously infrequent episodic headaches understandably come to use these medications more often as their headaches become more frequent. When this occurs with any delay in initiating preventative therapy, or reluctance to take preventative treatment due to anticipated or actual side-effects, this situation may escalate to daily or near-daily usage of analgesia and/or triptans, even though the patient may offer that "the medication doesn't really help, but I need to take it every day anyway". The revised ICHD criteria[8] define medication overuse as usage of ergotamine, triptans, opioids or combination analgesic medications on 10 or more days per month on a regular basis for more than 3 months. In addition, the revised criteria have acknowledged that patients taking simple analgesics or any combination of ergotamine, triptans, analgesics or opioids on 15 or more days per month, on a regular basis for more than 3 months, without overuse of any single class alone, also warrant a diagnosis of medication overuse.

The issue of how to optimally treat analgesia overuse in chronic migraine is one where received wisdom prevails without a strong evidence base. The traditional approach has been firstly to discontinue the overused medication where possible, or at least limit it to the recommended maximum frequencies above. This approach has been justified on the basis that medication overuse can in itself cause headache, as well as making the features of the underlying pain harder to characterise, and may interfere with the efficacy of preventative treatment.

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