Medication Overuse Headache

Making a Bad Problem Worse

Therapeutic Quicksand

Evelyn R, a 45-year-old female postal worker with a long-standing history of infrequent migraine episodes suffered a whiplash injury when the vehicle she was driving was rear-ended. Her consequent neck pain and stiffness eventually resolved with time and physical therapy, but almost immediately following the accident she began to experience a persistent low intensity headache and an increase in the frequency, severity and duration of her migraine episodes. Her primary care provider (PCP) prescribed a muscle relaxant and a compound medication for acute headache treatment which contains acetaminophen, caffeine and butalbital (a short-acting barbiturate). She noted no benefit from the muscle relaxant, but the headache medication was effective in temporarily reducing her "baseline" headache and in making the headaches of her superimposed migraine episodes more tolerable.

Her use of the compound medication gradually increased to the point where four months following the car accident she was taking one or two doses three times daily. Her PCP referred her to a neurologist who prescribed oral sumatriptan for acute headache treatment and advised her to discontinue the compound medication. Complying with his instructions, she immediately experienced a significant increase in her headache burden and rapidly used up the nine doses of oral sumatriptan which had been intended to last her for an entire month. Desperate for relief, she re-started the compound medication.

When she returned to the neurologist, he admonished her for having re-started the butalbital-containing compound, refused to refill her prescription for that medication and instead prescribed amitriptyline for headache prevention and a different oral triptan for acute headache treatment. The amitriptyline made no impact on her headache burden and caused dry mouth and daytime sedation. The new oral triptan provided only minimal and brief headache relief; once again, she used up her allotment of the triptan within the first week after filling her prescription.

When she implored the neurologist to refill the butalbital-containing compound, emphasizing that it was the only medication which really helped her headaches and allowed her to function normally, he told her that she had been abusing the compound, refused her to provide her with prescriptions of any kind and advised her to see a psychiatrist who specialized in addiction counselling.

Pity the poor patient. All she's seeking is relief from her headaches and a return to her normal level of functioning. Her interest in using the butalbital compound for "recreational" purposes is nonexistent, and yet she is told that she has been abusing that medication and needs to be

treated for addiction. This is by no means an unusual story.

So-called "medication overuse headache" (popularly known as "rebound" headache) most commonly is associated with chronic migraine. A diagnosis of chronic migraine implies that the individual has an established history of migraine and has been experiencing headaches on at least 15 days out of the month, with at least eight of those days involving headache characteristic of migraine. Completing the diagnosis, this pattern of headache and headache frequency must have been present for at least three consecutive months; a less strict definition of chronic migraine requires only that this pattern and frequency be present for at least three months out of the year preceding diagnosis. The topic of chronic migraine has been addressed in more detail and a previous issue of ***Migraineur***.

"Transformation" of migraine from its episodic form to its chronic may occur spontaneously or as a consequence of an external event (e.g., head or neck trauma) or a change in one's internal environment (e.g., impending menopause). In any event, chronic migraine often is complicated by overuse of symptomatic medication (medication which is intended for treatment of acute headache rather than for headache prevention). Such overuse may aggravate the individual's primary headache disorder, creating a situation where it becomes difficult to tell where the chronic migraine ends and the medication overuse headache (MOH) begins.

Symptomatic medications range from humble acetaminophen to potent opiates/opioids ("narcotics"). Patients such as Evelyn R understandably may tend to take symptomatic medication frequently in an effort to control their pain and so enable them to carry out their usual activities. With time they may begin to administer that medication in anticipation of headache, on more or less a scheduled basis, just as they would a medication intended for migraine prevention.

Unfortunately, virtually all of the medications commonly used for the treatment of acute headache -prescription or over-the-counter - have the potential to promote headache when used too often over a period of weeks to months. Some of the most common culprits are acetaminophen, compounds containing acetaminophen and caffeine (e.g., Excedrin), butalbital-containing compounds (e.g., Fioricet or its generic equivalent) and opioids (e.g., hydrocodone, oxycodone). Ironically, the medications which have the highest potential for reducing medication overuse headache and doing so rapidly are the triptans, the first "designer drugs" for migraine treatment.

In seeking to avoid MOH, how much is too much? How often can one take a given symptomatic medication and in what quantity before MOH becomes a real possibility? Practically speaking, how can the patient with chronic migraine know whether the symptomatic medication he/she frequently takes is helping versus contributing to the very problem (i.e., chronic migraine) that provoked use of that medication in the first place?

The most realistic answer is "it depends". The potential for developing MOH is

likely a function of the individual patient's unique biology and, perhaps even more important, the particular drug the patient is administering. As previously mentioned, the triptans appear to have the highest potential for producing MOH, doing so rapidly and at a relatively low frequency of use. At the other end of the spectrum, the nonsteroidal anti-inflammatory drugs (NSAIDs; e.g., ibuprofen) may have little or no potential for producing MOH. The OTC medications are the sneakiest amongst the group. The fact that they are effective when used appropriately, readily available and relatively cheap lures many migraineurs into steadily increasing their use of the given medication and so becoming mired in the swamp of MOH.

As a rule of thumb, to avoid MOH one should not use an opiate/opioid, a butalbital-containing compound or triptan more than nine days/month. Other symptomatic medications such as acetaminophen or compounds containing acetaminophen/caffeine should not be used more than 14 days/month.

How do you know whether your chronic migraine may contain a component of MOH? The following checklist may help:

- Are you using a given symptomatic medication more than three days/week on a chronic basis (i.e., every week for a period of months)?
- On the days you use the symptomatic medication, are you taking multiple doses?
- Is your headache regularly recurring at a certain interval after taking a dose of the symptomatic medication?
- Have you found that the effectiveness of the symptomatic medication seems to be steadily decreasing even as you increase your use of the drug?
- Are you being awakened from sleep by headache, or do you have a headache when you awaken in the mornings?

If your chronic migraine does contain a component of MOH, cutting back on your use of the offending agent unfortunately may not lead to immediate improvement. While patients experiencing MOH from overuse of one or more of the triptans often experience a reduction in headache burden quickly following a reduction in use frequency, weeks or even months may be required for your body to recover biologically from the effects of overusing most or all of the other symptomatic medications commonly administered for acute headache; the clinical improvement accompanying that recovery similarly may be delayed. Even so, stick with it! Once established, MOH typically must be removed from the picture if you are to experience any significant and lasting improvement in your headache disorder.

Even worse, there is emerging evidence that overuse of certain classes of these medications may inhibit or prohibit the treatment effect of therapies intended for the prevention/suppression of chronic migraine. Recent studies have indicated that chronic migraine patients overusing either a butalbital-containing compound or an opioid are significantly less likely to experience an early positive response to prevention therapy with an oral medication (topiramate) or with onabotulinumtoxinA.

To experience lasting improvement, MOH must be removed from the picture

In summary, your strategy for defeating chronic migraine typically should include the following:

1. Prescription of effective prevention/suppression therapy
2. Aggressive treatment of acute headache that minimizes the likelihood of experiencing a prolonged, severe headache episode
3. Avoid symptomatic medication overuse
4. Treatment of chronically disrupted sleep, if present
5. Effective treatment of any coexisting anxiety and/or depression
6. Faithful use of a simple headache diary

It's true that numbers 2 and 3 appear contradictory, and balancing the two can be difficult. If you are experiencing acute headache on a daily or near daily basis, how can you treat those headaches aggressively and effectively and still avoid overusing symptomatic medication? Solving that riddle often requires informed input from a healthcare provider who will prescribe multiple symptomatic medications, each to be used at a judicious frequency and according to the level of headache intensity present.

Finally, if you find it impossible to cut back on your use of the symptomatic medication that is likely to be contributing to your chronic migraine, do not hesitate to discuss this with your healthcare provider. Nothing is to be gained by keeping the information to yourself, and to do so risks a strong possibility that your chronic migraine will progressively worsen and possibly become yet more resistant to any treatment prescribed. There are various techniques available to assist patients in reducing their use of a given symptomatic medication, and at times hospitalization may be required to facilitate that process.

In attempting to control your chronic migraine, your healthcare provider should be your consultant, advisor and advocate…not your adversary. Working together, chances are good that you will enjoy a significant reduction in your headache burden.