

Headache Toolbox

Prevention of Migraine

When migraines become so frequent or severe that they interfere with work or usual activities, it is time to consider using preventive strategies. If acute medications are being used more than 2 days per week, this alone can lead to more headaches, sometimes called rebound or medication overuse headaches, and the only way out of this quagmire is to start a preventive strategy.

Prevention is not a cure. It is highly likely that migraines will continue to occur, and in fact a preventive may be considered successful if the frequency, severity, and/or intensity of the headaches are cut in half. There is no preventive strategy known that does not have the potential for side effects, but this must be balanced against the possible gain from feeling better, and being able to work, play, and generally function more normally without relying too much on ongoing acute medications.

In 2012, new guidelines were published by the American Headache Society outlining recommendations for preventive migraine medications based on evidence from published studies and clinical experience. The choice of preventive medication needs to be a balance of effectiveness and whether it helps with other problems a migraine sufferer may have, versus any potential side effects.

Dividing up preventive medications into broad categories may be helpful in deciding which strategy is appropriate. For this toolbox, we will start with the prevention of episodic migraines, that is, attacks of migraine in which the total number of headache days per month is less than 15.

Five categories to be considered for preventing episodic migraines are the blood pressure group, the anti-seizure group, the antidepressant group, the natural supplement group, and a mis-

cellaneous group. Choosing between these groups could be based on whether an individual has other health concerns. For example, those with depression would be helped on two fronts, headache and mood, by choosing an antidepressant. Those with higher blood pressure would choose the antihypertensive group, and if a patient has a history of seizures, some of the anti-epileptic medications may help with their migraines.

Blood Pressure Medications.—These are old standbys in headache prevention because they help address any elevations in blood pressure, they are typically inexpensive, and beta-blockers can be effective in reducing anxiety, which is not an uncommon problem in migraine patients. The most evidence favors the beta-blockers metoprolol, propranolol, and timolol, followed by atenolol and nadolol. Propranolol and timolol have US Food and Drug Administration (FDA) approval for migraine prevention; the others do not. Should beta-blockers not be advised, for example in very athletic patients, or those with Raynaud's (spasm of the arteries in the fingers with cold) or asthma, the angiotensin-converting enzyme inhibitor lisinopril, or the angiotensin receptor blocker candesartan, may be useful. For those who have heard that calcium channel blockers, such as verapamil, may help prevent migraine, the most recent guidelines did not find strong evidence to support their effectiveness.

Anti-Seizure Medications.—This group of medications can be equally as effective as beta-blockers, depending on which ones are chosen. Divalproex sodium and sodium valproate (often called Depakote) is a long-standing and effective preventive agent. Generally, it is well tolerated too, but can be associated with weight gain, can affect the ovaries, can cause birth defects, and should be avoided by those with liver disease.

Topiramate is another effective preventive medication. While it can result in tingling, word finding problems, and memory issues, its most beloved side effect is the potential for weight loss. Both valproate and topiramate are FDA-approved for migraine prevention. Other common medications for prevention, such as gabapentin and lamotrigine, lacked sufficient evidence for being effective.

Antidepressant Medications.—Amitriptyline is an old, inexpensive medication and effectively prevents episodic migraine. While it can help with sleep and mood, it can result in weight gain, sedation, and dry mouth. A newer antidepressant that made it to the preventive list is venlafaxine, which helps with mood and does not result in weight gain. It is usually taken in the morning and can be energizing, so it does not help people fall asleep. Selective serotonin reuptake inhibitors, such as fluoxetine (Prozac), sertraline (Zoloft), and paroxetine (Paxil) work well for depression and anxiety, but lack strong evidence supporting effectiveness as migraine preventives.

Nutritional Supplements, Vitamins, and Minerals.—The supplement group is usually well tolerated by most people, although the effectiveness may not match stronger prescription counterparts. Petasites (butterbur) was found to be effective as a preventive. Riboflavin, magnesium, and MIG-99 (feverfew) are probably effective, and CoQ10 is possibly effective.

MISCELLANEOUS PREVENTIVE STRATEGIES

There is only one FDA-approved medication for preventing chronic migraine, defined as headache at least 15 days per month at least 4 hours per day. OnabotulinumtoxinA (commonly called onabot or Botox) was approved by the FDA in October 2010 for those with chronic migraine, also referred to as chronic daily

headache. Onabot is administered using 31 small injections in the head and neck in defined locations. Although often effective, it must be administered every 90 days by an individual trained in the migraine injection protocol. It is expensive, and many insurance companies require that a patient try other preventive agents first, even though there are no other FDA-approved medications for chronic migraine. Onabot is well tolerated and does not result in problems with thinking, mood, or weight gain, which can be issues with other preventives.

Triptans can also be used preventively in certain well-defined circumstances. Although overuse of these migraine-specific medications can increase headache frequency, when used as “mini prevention” or for short periods of time when migraines can be predicted, frovatriptan and naratriptan can be effective. For example, women may use them for the week just before and just after the start of menses, although they are not FDA-approved for this purpose.

SUMMARY

Preventing migraines, decreasing their frequency, intensity, or severity, or even making them more responsive to acute medications are important goals for every migraine sufferer. Ideally, the choice of preventive strategy should be matched to the individual patient. Many times preventive medications can help treat another problem, such as high blood pressure, depression, anxiety, or trouble sleeping. A preventive strategy is best formulated with a team approach involving the patient and caregiver, balancing effectiveness, side effects, and potential non-migraine benefits.

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