Migraine Solution

By Dr. Sergey A. Dzugan

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Migraine, often described as an intense pulsing or throbbing pain in one area of the head, can be a debilitating, even life-threatening disorder. The crippling effects of migraine have been known for thousands of years. In fact, the Ebers papyrus of ancient Egypt, the world's oldest preserved medical document, contains a long chapter on purported remedies for migraine.[1]

The specific causes of migraine remain unknown.[2] Despite ad-vances in the understanding of the pathophysiology of migraine, effective new treatment options, and repeated initiatives over the years, migraine remains an under-recognized, under-diagnosed, and under-treated health condition in everyday clinical practice. Most patients attempt, without success, to treat their headaches with over-the-counter medications.[3,4]

In a previously published paper, we described migraine as a consequence of a loss of neurohormonal and metabolic integrity.[5] In this case history, we present a patient with long-lasting, severe migraine and a new and very promising approach to correcting this pathology.

Background

Patient "CH," a 35-year-old white male, was seen in March 2004. He had a personal history of migraine dating back to 1990, when he was 21. Before the onset of migraine, he had been in excellent health. CH complained of migraine, depression, fatigue, very poor long-term memory as well as significantly diminished short-term memory, and elevated cholesterol.

Typically, patient experienced two or three migraine attacks each week. Usually the migraine started in the early afternoon. He often had to go home from work and try to sleep, blocking out all light and sound, and using cold compresses. He rarely suffered an attack at night.

For a number of years, CH had simply taken aspirin, Tylenol®, and usually something with caffeine to try to relieve his headaches, without much success. He eventually began to use Imitrex® by injection, a prescription medicine for acute migraine. Although Imitrex® is also available in the form of pills and nasal spray, he had found the pills were not as effective or quick acting, while the nasal spray would drip down his throat and cause him to become nauseous. Usually after taking the injection and lying down for 15 minutes, he could completely abort the migraine. He had also tried pill forms of other medications such as Zomig®, Amerge®, and Maxalt®, but none worked as well as Imitrex®. Occasionally, if CH did not take a shot early enough in the day, he would then have to take an additional one or two doses of Imitrex®.

Patient had experienced visual disturbances in about 20% of his migraine attacks and nausea in about 10% of them since he began taking Imitrex® in 1995. He became very adept at recognizing migraine before actually experiencing any head pain, and has not suffered many "full-blown" migraine attacks in recent years. He has always been concerned about the amount of Imitrex® he takes weekly, which is usually two or three doses, but sometimes six or seven.

Several years ago, CH also started taking Midrin®, another prescription medication, if he started to get migraine fairly early in the day (three capsules, usually with a Coke for the caffeine). In most instances, however, he was merely postponing the eventual Imitrex® injection. For years now, patient has kept Imitrex® with him at all times (in his desk, briefcase, car, and, depending on where he was or what he was doing, in his pocket). He

credits Imitrex® with enabling him to maintain steady employment, become successful in his career, and otherwise live a normal life.

CH had a vasectomy in his mid-twenties, but he does not recall a change in the frequency of his migraine following surgery. Five years ago, his doctor in-formed him that his total cholesterol was high. Because of his concerns about the dangers of consuming animal products, patient has followed a vegetarian diet for years.

Both his mother and father have suffered from headaches their entire lives. His mother experiences fairly typical migraine, but only a few times a year. His father has almost daily headaches that do not appear to be migraine, and "lives on Excedrin®."

About three and a half years ago, CH had a lower back problem. Magnetic resonance imaging showed that all of the discs in his back seemed to be "thinner" than they should be. Imitrex® was suspected to be the cause of this cartilage deterioration (the Physicians' Desk Reference entry on Imitrex® alludes to this potential side effect). Patient was terrified by the possibility that he had permanently damaged his health and would suffer for years as a result. His neurologist did not confirm a connection between his use of Imitrex® and the back problem. It was recommended that he continue using Imitrex® because it seemed to work for him. Later, CH had surgery to fix his herniated disk, and he has not had any back problems since the surgery.

Over the years, patient has asked many doctors what he could do about his migraine. He has kept countless diaries tracking possible triggers, only to decide that he had a seemingly unending list of potential suspects: stress, computer usage, too little sleep, too much sleep, changes in food or caffeine intake, bright lights, bad smells, wine, cheese, chocolate, and so on. He could not find a common denominator, and was always told to just continue taking Imitrex® since it worked so well for him. During this period, he also began taking an antidepressant (20 mg of Paxil® daily) for symptoms common to depression, including fatigue, lack of motivation, poor memory, and inability to concentrate. Early on, patient "thought" he had noticed a decrease in the frequency of migraine while on Paxil®, and as a result he has taken it religiously for years.

CH has tried practically all the currently available supplements for migraine, including feverfew, butterbur extract (Petadolex®), and magnesium. He has likewise used a prescription drug for epilepsy to try to reduce the frequency of migraine, but without success. During these experiments, he continued to use Imitrex®, often fighting with insurance companies to be reimbursed for the injectable form of the drug and the quantity of it required. Patient eventually discovered that he could "half dose" in many cases and still abort his migraine. He conservatively estimates that he has taken over 800 doses of Imitrex® and thousands of Midrin® capsules, and shudders to think of the total costs of these drugs in prescription co-pays and insurance outlays. Based on the $50 cost of an injectable dose, he estimates that he has probably spent at least approximately $40,000 on Imitrex® alone.

Diagnosis and Treatment

We suggested that CH undergo blood testing to ascertain his hormone levels. Blood testing—including lipid profile, pregnenolone, DHEA sulfate, total testosterone, estradiol, and progesterone—confirmed a severe, underlying hormonal imbalance. His total cholesterol level was high (257 mg/dL, compared the recommended range of less than 200 mg/dL). As reported in previous studies,[6-8] we believe that elevated total cholesterol reflects insufficient steroid hormone production. Patient's total testosterone, pregnenolone, and DHEA sulfate levels were below the standard ranges for these hormones (laboratory ranges for the 20-29 age group).

The lab report numbers were as follows: total testosterone was 187 ng/dL (standard range is 241-827), pregnenolone was less than 10 ng/dL (standard range is 10-200), and DHEA sulfate was 199 ug/dL (standard range is 280-640). Progesterone, at 1.6 ng/mL, was slightly higher than the maximum standard level (standard range is 0.3-1.2). Estradiol was within the standard range, at 18 pg/dL (standard range is 0-53).

Patient's initial program included:

- 100 mg of pregnenolone taken in the morning
- 25 mg of DHEA taken in the morning
- 420 mg (one scoop) of Magna- Calm (magnesium citrate) at bedtime
- one capsule of MetaRest (con- taining 3 mg of melatonin, 250 mg of kava root extract, and 10 mg of vitamin B6) at bedtime
- one scoop of ProGreens probi- otic formula (including lacto- bacillus group 3.5 billion, bifi- dobacterium group 1 billion, and streptococcus thermophilus 0.5 billion) in the morning.

We discussed with CH the necessity of replacing all three deficient hormones (pregnenolone, DHEA, and testosterone), but he preferred to stay with this initial program without testosterone for a couple of weeks.

About a week later, patient began to experience night sweats and his body temperature soared from 95.6 to 102.7 degrees F. His doctor prescribed an antibiotic, and a week or so later the symptoms ceased. Based on his very low testosterone level, we sent him to a urologist for further tests and a testosterone prescription. The urologist ordered a CT scan of his pelvis and head, which apparently showed nothing abnormal. The urologist said he thought CH's testosterone levels might be low as a result of his vasectomy years ago. He also said he was unaware of any correlation between testosterone levels and migraine incidence.

On April 15, 2004, the urologist prescribed TestimTM 1% testosterone gel. Patient began using the gel daily. As of today, CH reports he is completely migraine free. He has also experienced an improvement in sexual function and energy levels, without any negative side effects.

Commentary

We have called attention to CH's case because we believe that most migraine sufferers can be free of this devastating disorder. Migraine is a very complex disease, and affects up to 12% of males and 24% of females.[9] Feedback from peripheral organs can be disrupted and disregulation may occur, leading to physiological instability and functional disease. Because migraine usually is characterized by combinations of neurohormonal, metabolic, and (quite often) gastrointestinal manifestations,[5] a multimodal treatment strategy is required.

Prophylactic treatment of migraine patients is desirable because the currently prescribed prescription drugs are not always effective in all patients and allow recurrence of headaches in a high percentage of patients, occasionally with severe adverse side effects.

It has been previously reported that sex hormones play an important role in the creation and regulation of migraine.[10] Significantly low plasma testosterone levels were found in active cluster headache patients.[11] CH's case shows that hormonal restoration is a key element of any program recommended for the management of migraine.

Several studies have shown that magnesium and melatonin can provide relief from migraine.[12-15] We recommend that both agents be included in treatment programs that aim to eliminate migraine.

Because major depression is approximately three times more common in persons with migraine[16] and fatigue likewise is common in migraine patients,[17] we must stress the importance of the association between hormonal therapy and kava root extract, which may represent an excellent therapeutic tool for treating migraine, particularly for those suffering from anxiety and depression. Kava kava therapy accelerates the resolution of psychological symptoms without diminishing the therapeutic action of hormones.

Restoration of natural intestinal flora, from our point of view, is also extremely important in treating migraine, because migraine patients usually take different drugs over the years that change intestinal flora and diminish intestinal absorption.

We recommended our program to CH to restore youthful levels of hormones, rebalance the autonomic nervous system (sympathetic and parasympathetic systems), improve the calcium:magnesium ratio, and enhance intestinal absorption. Because CH's migraines and concomitant symptoms have disappeared, we believe that this case report suggests that similar treatment methodologies may have a wider application in patients with migraine.

PATIENT CH's TESTIMONIAL TO HIS COLLEAGUES

A quick "thank you" to Dr. Dzugan.

I've suffered from migraine for about 14 years, and for the last nine or so I have absolutely lived on Imitrex® injections, pills, and other prescription drugs. During this time, I had five different doctors, and saw two neurologists, all of whom simply told me to continue taking Imitrex® when I got headaches. I would conservatively estimate that I averaged one to two headaches a week, and have taken hundreds of doses of Imitrex®, and likely a couple of thousand Midrin®, Excedrin®, and other such drugs.

Dr. Dzugan suggested a couple months ago that I have my hormone levels checked, and he was not surprised by what my results showed. After talking with Dr. Dzugan, my physician, and a urologist, it was determined that supplements alone wouldn't likely correct my hormone imbalance, and I'm now taking a hormone replacement. Since starting on this treatment, I have not had a single migraine headache.

In all of these years, not one doctor, or any article or study, suggested that I should check for a hormone imbalance as the cause of my migraines. Dr. Dzugan has done what no one else ever could.

I can't thank him enough, nor endorse his abilities enough, to ever repay him for his help. Thanks again.

Sincerely, CH

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