Biphasics Not Good Mix for Menstrual Migraines

Low-dose, monophasic contraceptives seem to benefit migraine sufferers more.

BY NANCY A. MELVILLE
Contributing Writer

SCOTTSDALE, ARIZ. — Fluctuating hormones are believed to be the key culprit behind menstrual migraines, so low-dose monophasic oral contraceptives are generally the best alternative to help such patients, Christine Lay, M.D., said at a symposium sponsored by the American Headache Society.

Physicians often turn to biphasic contraception instead of monophasic pills in the belief that varying the hormone dosage will help alleviate menstrual migraines, but the dosage schedule can in fact make the problem worse, said Dr. Lay, a neurologist with the Headache Institute at Roosevelt Hospital, New York.

Dr. Lay gave the example of Mircette, which contains 21 days of 0.15-mg desogestrel/0.02-mg ethinyl estradiol, followed by 2 days of placebo pills and 5 days of 0.01-mg ethinyl estradiol.

"I have numerous ob.gyns. who put patients on Mircette because they think it might help menstrually-related migraines," she said.

Instead, the method introduces another level of fluctuation of estrogen, and it is that fluctuation that is believed to trigger the migraines in the first place, said Dr. Lay. "It's not whether the estrogen is present or absent, but [it's] the change in estrogen and I find many patients don't do well on Mircette because of fluctuations in estrogen."

Even worse for menstrual migraines are triphasic pills, which cause greater fluctuation in hormone levels and often are high-dose pills, Dr. Lay said.

"The triphasic pills are the worst for migraine patients," she said. "Invariably, you will have a patient track her calendar and over a month's period of time she will report that within a day or two of switching to a new dose of pill, the woman will experience a migraine attack."

Migraine patients generally fare much better when using monophasic low-dose (20-mcg) birth control pills, which offer a more uniform hormone level, Dr. Lay said. She added that the estrogen patch is another effective way of providing a more steady level of estrogen.

Newer noncycling methods such as Seasonale (ethinyl estradiol and levonorgestrel) are also good alternatives for migraineurs, she said. "With a 91-day regimen, including 84 days of real pills and then the placebo pills, women skip perhaps three out of every four menstrual migraine attacks, because they're not having a menstrual cycle," Dr. Lay said in an interview.

In the ebb and flow of hormone levels, it is the withdrawal of estrogen, specifically, that experts believe contributes to menstrual migraines.

Estrogen use in patients who suffered from migraines was frowned upon for many years, but the International Headache Society Task Force on Combined Oral Contraceptives and HRT determined more recently that it was safe for migraineurs, provided that there are no other risk factors for coronary heart disease or vascular disease.

In addition, the migraine should be without aura and patients should be given the lowest effective hormone dose.

In the ebb and flow of hormone levels, it is the withdrawal of estrogen, specifically, that experts believe contributes to menstrual migraines. The withdrawal is believed not only to affect trigeminal pain pathways and have vasculature effects, but it may modulate neurotransmitters and magnesium, Dr. Lay said.

The release of prostaglandin also plays a role in migraines, sensitizing peripheral nociceptors to pain and mediating hyperalgesia, and prostaglandin is known to increase during migraine attacks.

A key approach to treatment is having patients maintain a diary in which they track their menses and headache days, Dr. Lay said. The journal can help guide treatment options and determine the role of oral contraceptive use.

"This is a critical time to discuss with patients pregnancy planning and medication contraindications in pregnancy because, invariably, some of these patients could wind up getting pregnant" unintentionally.

"We recommend taking a patient off the pill when efforts to prevent migraines are unsuccessful," Dr. Lay added."Physicians may have the patient go off the pill in order to observe the migraine pattern over time. However, the migraine pattern may not improve for at least 3-6 months. In such cases, it's essential to talk about pregnancy issues if the patient is on the pill for contraceptive purposes," she said.

Short-term prophylaxis approaches recommended range from NSAIDS to triptans, and for a more long-term prevention, Dr. Lay suggested considering standard preventive medications, including tricyclic antidepressants, antiepileptic drugs, β-blockers, and selective serotonin reuptake inhibitors. ■

Try Higher Oxygen Flow for Cluster Headache Patients

BY ROBERT FINN
San Francisco Bureau

LAS VEGAS — The flow rate of oxygen routinely prescribed to abort cluster migraine is too low to be effective in many patients, Todd D. Rozen, M.D., said at a symposium sponsored by the American Headache Society.

Since the effectiveness of inhaled 100% oxygen for cluster headache was demonstrated in 1981, clinicians have typically prescribed flow rates of 7-10 L/min, said Dr. Rozen of the Michigan Head-Pain and Neurological Institute in Ann Arbor.

About 30% of patients fail to respond to flow rates in this range. In a recently published case series, Dr. Rozen described three patients whose headaches were apparently refractory to oxygen but who all responded well when the flow rate was pushed to 15 L/min—about the maximum flow rate delivered by most medical-grade oxygen regulators (Neurology 2004;63:593).

"I'm now telling my patients that you're not resistant to oxygen until you try 15 L/min," Dr. Rozen said.

There are a number of caveats regarding oxygen therapy for cluster headache. The gas must be delivered through a nonrebreather face mask, and patients must be cautioned strongly about the highly flammable nature of pure oxygen. In addition, the higher flow rates may be dangerous in patients with chronic obstructive pulmonary disease.

Oxygen is thought to exert its effect on cluster headaches through cerebral arterio- and vasoconstriction. Many people whose headaches appear refractory to oxygen therapy are smokers; according to the pulmonary literature, smokers exhibit less vasoconstriction in response to 100% oxygen than do nonsmokers.

Dr. Rozen hypothesized that in some individuals, a higher oxygen flow rate is needed to obtain a clinically meaningful degree of vasoconstriction.

Cluster headache is the most severe head-pain syndrome known, and rapid abortive therapy, either at home or in the emergency department, is critical. The goal of abortive treatment is to stop the pain within 10-15 minutes.

Oxygen therapy is a good choice for patients whose cardiovascular risk factors render them unsuitable candidates for injected sumatriptan.

"I don't know how many times I've seen cluster patients who have never tried oxygen," Dr. Rozen said. "You have to remember that they are smokers; they have cardiovascular risk factors over time. At some time, they're not going to be able to take sumatriptan injection any more, so you want to try oxygen."

In the United States, patients must have a physician's prescription to get oxygen for home use. ■

History and Physical Critical in Secondary Headache Diagnosis

BY ROBERT FINN
San Francisco Bureau

LAS VEGAS — Even in a neurologist's office, every headache patient merits a general history and a physical examination, which may be the best tools with which to differentiate secondary from primary headaches, John G. Edmeads, M.D., said at a symposium sponsored by the American Headache Society.

"The headache never walks alone" when it is secondary to a general medical condition, said Dr. Edmeads of Sunnybrook Medical Centre, Toronto.

"There's always something on history or physical to give you a clue that there's a general medical disease going on. And once you have this clue you can diagnose them through a focused work-up that won't cost an arm and a leg," he explained.

Dr. Edmeads offered the following suggestions:

► Neurologists can't assume that patients have had a thorough evaluation before reaching their offices. Dr. Edmeads said that he has had patients ask about the blood pressure cuff as if they had never seen one before.

► Be suspicious if the patient's signs and symptoms don't clearly meet International Headache Society criteria for primary headache. Any patient whose headache doesn't meet the society's criteria deserves additional investigation.

► If it's not clearly migraine or tension-type headache, look for evidence of central nervous system involvement, either in the brain or its coverings. If there's any indication of CNS involvement, the next step includes neuroimaging and possibly examination of the patient's cerebrospinal fluid.

► If there are no signs or symptoms of CNS involvement, then conduct a general medical screen. This should include a CBC; an erythrocyte sedimentation rate; electrolytes, including calcium and phosphate; BUN and creatinine; liver enzymes and bilirubin; thyroid function studies, including TSH, T3, and T4; and a chest x-ray. Answers will come back within a day or two and will cost less than a couple of hundred dollars, Dr. Edmeads said.

► If those studies are negative, consider serum protein electrophoresis and arterial blood gases. In winter, consider carbon monoxide poisoning and test for carboxyhemoglobin. Carbon monoxide poisoning from poorly maintained heaters will often present as daily, diffuse, nocturnal headaches that clear up in the morning when patients get out into the fresh air.

► If all results are still negative, but you still have a strong suspicion that the headache is the result of a general medical condition, consider a consultation with a general internist. ■