

Simplify Headache Therapy to Boost Adherence

BY CHRISTINE KILGORE

EXPERT ANALYSIS FROM THE ANNUAL MEETING OF THE SOCIETY OF BEHAVIORAL MEDICINE

WASHINGTON – Strategies to increase adherence to headache therapy work best when multiple modalities are used together at every visit throughout the duration of treatment, according to Jeanetta C. Rains, Ph.D.

"The more comprehensive the approach, the more adherence can be improved," she said at the meeting.

The typical response to treatment failures is changing the drug choice or dosing; that's a mistake, she said. It would be better to assess adherence. "All patients are candidates for adherence facilitation."

Dr. Rains suggested the following strategies for boosting adherence to headache therapy:

► **Assess and treat comorbidities and behavioral concerns.** Unaddressed depression, anxiety, somatic preoccupation, and low self-efficacy can each affect adherence and subsequent outcomes. "Patients who are depressed, for instance, are three times less likely to take [their prescribed regimens]," she said.

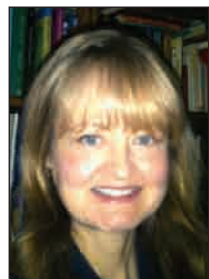
► **Simplify the treatment regimen.** Studies consistently show that adherence decreases as the number of medications and daily doses increase.

► **Consider past behavior and prior experience.** Positive prior experiences

with medication can enhance response, while negative expectancies may worsen symptoms and amplify side effects. Differentiating current treatment from past failures is key, Dr. Rains said.

► **Predict a positive but realistic outcome.**

► **Associate any positive outcome to patient behavior and perseverance.**



'Patients who are depressed, for instance, are three times less likely to take [their prescribed regimens].'

DR. RAINS

There is no sure way to assess and track adherence accurately, she acknowledged.

Face-to-face interviewing is the most widely used tool, but it also is the least reliable. "Self-reporting actually overestimates adherence by 30%, compared with more objective monitoring," she said. Diaries and questionnaires are better, and electronic measures are better still. "Yet, even the most objective measures are not entirely reliable," she said. "Studies have shown, for instance, that some patients dump their canisters in anticipation of their visits, and that electronic daily diaries are sometimes completed on the day of the office visit."

Mechanical and electronic tools can "remind" patients to take a preset dose and track their use, but these tools do not address a patient's conscious decision to alter a regimen, she warned.

Relatively few studies have addressed the issue of adherence in headache treatment, but the literature definitively shows that "nonadherence with headache medication regimens is common," said Dr. Rains, who reviewed the literature on headache treatment compliance and empiric adherence-enhancing strategies.

"And patients who don't take their medication or who overuse symptomatic medications can aggravate their headache, create a pattern of medication-overuse headache, or transform an episodic headache into a chronic daily headache," said Dr. Rains, who directs the center for sleep evaluation at Elliot Hospital in Manchester, N.H.

One large study of patients with severe headache found that 11% did not fill their initial prescriptions (high cost and concerns about side effects were common reasons) and that 70% did not adhere to their abortive medication regimen.

Other studies have shown that 25%-50% of headache patients do not adhere to their preventive medication regimen, and commonly avoid or delay the use of abortive medication because they want to "wait to see if it's a migraine or if it's severe," she said. Concerns about adverse effects and dependency or addiction also

are cited as factors in avoiding or delaying use of abortive medications.

This makes education critical. For effective patient education about headache and forms of treatment, physicians should use simple, everyday language; limit instructions to three or four major points; supplement verbal with printed instructions; ask patients to restate the plan; and involve family members or significant others.

"And remember, repetition increases retention," she said.

Moreover, "the way we engage is important," Dr. Rains said. Adherence increases "not only when we give more information to patients, but also when we ask patients about their feelings and opinions, and when we praise them when they're doing well."

She advised forming a collaborative alliance, discussing barriers to treatment, and being supportive of patients who have difficulty meeting their goals. "At the end of a visit, you can ask your patient to rate how important it is for him or her to do the things you've been talking about. Then you can ask the patient to rate his or her confidence level for adhering to the treatment plan." Behavioral strategies can help to target the many psychosocial determinants of adherence, as well as the fact that patients' motivation for treatment often shifts over time.

Dr. Rains reported that she had no relevant financial disclosures. ■

Cyclic Vomiting Syndrome, Metabolic Dysfunction Linked?

BY MICHELE G. SULLIVAN

FROM THE ANNUAL MEETING OF THE AMERICAN HEADACHE SOCIETY

WASHINGTON – About a third of children with cyclic vomiting syndrome appear to have some metabolic condition, either mitochondrial dysfunction, fatty acid oxidation dysfunction, or a combination of both.

Unfortunately, there seems to be neither rhyme nor reason to the pattern. "Some showed the abnormalities only when well, some showed them only when acutely ill, and some showed them all the time," Dr. David Rothner said at the meeting.

Dr. Rothner, director of the Pediatric/Adolescent Headache Program at the Cleveland Clinic, and his colleagues presented the largest-to-date case series of metabolic testing in children with cyclic vomiting syndrome. Considered one of the three subtypes of migraine, cyclic vomiting is a debilitating illness with no known etiology and virtually no physical abnormalities that account for its occurrence.

The condition is a chronic disorder characterized by repeated, stereotypical vomiting episodes accompanied by severe nausea and sometimes by headache. The four components to the syndrome include the prodrome, when severe nausea is present; the severe emetic phase; the postemetic phase; and the time between cycles, during which the patient is entirely well.

Most frequently, the vomiting episode begins between 4 and 6 a.m. "During a spell, a child can vomit every 10-15 minutes, for up to 2 days. There is more vomiting with this syndrome than in any other disease known to man."

Diagnosis can be made only by ruling out every possible physical cause.

"Often, the time from the first episode until diagnosis

VITALS

Major Finding: One-third of children with cyclic vomiting syndrome showed metabolic testing results suggestive of mitochondrial or fatty acid oxidation dysfunction.

Data Source: A case series of 106 children with the disorder.

Disclosures: Dr. Rothner reported having no financial disclosures.

can be 3 or 4 years, which is tragic," he said.

The prospective cohort consisted of 106 consecutive patients seen at the clinic from 2007 to 2010. Most were 8 or 9 years old, male (57%), and white (77%), and "most importantly, 26% had a personal history of migraine, which did not occur during the vomiting."

Most of the children (71%) also had a family history of migraine; 10% had a family history of epilepsy.

The episodes occurred an average every 4 weeks. The mean duration of the acute phase was 25 hours, with a mean of 18 vomits during that time, up to 5 per hour. "There was complete resolution of symptoms between the spells in 88% of these children," Dr. Rothner said.

Most children (73%) had a prodromal phase, usually abdominal pain and nausea. There were some identifiable triggers for 66%, including viral illness, and motion sickness. Along with vomiting, 25% of the children had some autonomic symptom, including fever and hypertension.

Of the 42 patients who underwent magnetic resonance imaging, 57% had normal results. "Some of them already had the abnormalities recognized before the disorder began, but none of them had anything to do with the vomiting," Dr. Rothner said.

He and his team also performed abdominal ultra-

sound on 41 children during the acute phase to rule out intestinal malrotation or volvulus. There were no gastrointestinal abnormalities related to vomiting. Esophagogastroduodenoscopies in 27 patients showed six cases of gastritis, but no serious issues.

The investigators aimed to perform metabolic testing of blood and urine during both the well and ill phase in all children. At least some testing was accomplished in 58. One-third of the children tested during the ill or well phase, or during both, showed some sign of mitochondrial dysfunction or abnormal oxidation of fatty acid.

But the results were very difficult to interpret, Dr. Rothner said. "Of the 16 patients who had testing at both phases, 13 had abnormalities. But three showed mitochondrial dysfunction when well and not when ill, four had abnormalities when ill but not when well, and another three had some combination of mitochondrial and fatty acid dysfunction during both times. When we looked at the metabolic testing based on timing, we expected to find more abnormalities at the time of acute illness, but this was not the case. The results were not consistent."

There is no universally accepted treatment for the disorder. "Nothing controls it or makes it go away," Dr. Rothner said. For prophylactic treatment, about half of the group experienced some benefit from amitriptyline. During the acute phase, 85 children tried high-dose oral ondansetron, which improved or resolved symptoms in 66%. Now, based on the metabolic testing, some of the children in the group also receive carnitine and co-enzyme Q10, which Dr. Rothner said confers at least some benefit to about half the group.

The children are part of a continuous study which Dr. Rothner hopes will shed more light on the disorder's connection with metabolic dysfunction. ■