Chronic Headache, Pain Disorders in Girls Linked

BY SHERRY BOSCHERT

FROM THE ANNUAL MEETING OF THE AMERICAN HEADACHE SOCIETY

LOS ANGELES – Three-fourths of 82 adolescent girls with chronic daily headache also fulfilled diagnostic criteria for fibromyalgia, and other pain-related disorders and comorbidities were common in a screening study.

Although adults with chronic daily headache are known to be at higher risk for pain in other body regions, compared with adults without chronic daily headache, it has not been known whether this phenomenon also applies to adolescents, or to what extent.

Dr. Daniel J. Lacey screened for "central sensitization" pain comorbidities in adolescent girls with chronic daily headache seen in the chronic pain or adolescent headache clinics at a Midwestern children's hospital. He also screened for more commonly recognized comorbidities – anxiety, depression, and sleep disorders – in children with chronic headache, as well as for neck and back pain, orthostatic intolerance, dysmenorrhea, pelvic pain, and joint pain or swelling.

In all, 62 patients (75%) had more than five positive fibromyalgia syndrome tender points, although only 25 of these patients complained of chronic widespread pain (40% of screen-positive patients), he reported in a poster presentation at the meeting. In addition, 49 patients (60%) screened positive for irritable bowel disease, and 37 patients (45%) reported at least moderate neck and/or back pain. Most patients complained of significant chronic tiredness, and 12 (15%) screened positive for chronic fatigue syndrome, reported Dr. Lacey of Wright State University in Dayton, Ohio.

Almost the entire cohort had mild orthostatic intolerance, and 16 patients (19%) felt that it was disruptive. Five patients (6%) had postural orthostatic tachycardia syndrome. Although 19 patients (23%) said that anxiety and/or depression were significant issues, mothers of the patients rated these two problems as much more consequential, he said.

Nearly all patients complained of at least moderate levels of nonrestorative sleep. Dysmenorrhea was common. School absences were a significant problem for 25 patients (30%), and many others were being homeschooled or were pursuing online education.

"Clinicians who treat teens with chronic daily headache also need to screen for other pain disorders in addition to other pain comorbidities," Dr. Lacey stated in the poster. "Those adolescents who have chronic daily headache and irritable bowel syndrome are at highest risk for central sensitization disorders such as fibromyalgia syndrome, chronic fatigue, and disturbed sleep. If these are not recognized and adequately treated, restoration of normal functioning may be limited."

Cognitive problems were only infrequently seen in this cohort.

Chronic daily headache was the initial manifestation of headache disorder in 19 patients (23%). Most patients had episodic, intense migraines in addition to their usually migrainous chronic daily headache.

Because of the small number of patients and the multiple and different medications being used by patients, Dr. Lacey could not rigorously compare the efficacies of treatments for chronic daily headache in patients with or without pain comorbidities. His experience suggests, however, that medications used primarily for headaches may not be as effective for adolescents who also have comorbid pain disorders.

When amitriptyline monotherapy was used to treat chronic daily headache, the headaches improved similarly in patients with or without other pain comorbidities. When topiramate or valproate monotherapy was used, however, these agents seemed to be less successful at improving headaches in patients with other pain comorbidities, compared with patients who had chronic daily headache alone, said Dr. Lacey, who indicated that he had no conflicts of interest. ■

Device That Measures Reaction Times Might Identify Concussion in Athletes

BY ROBERT FINN

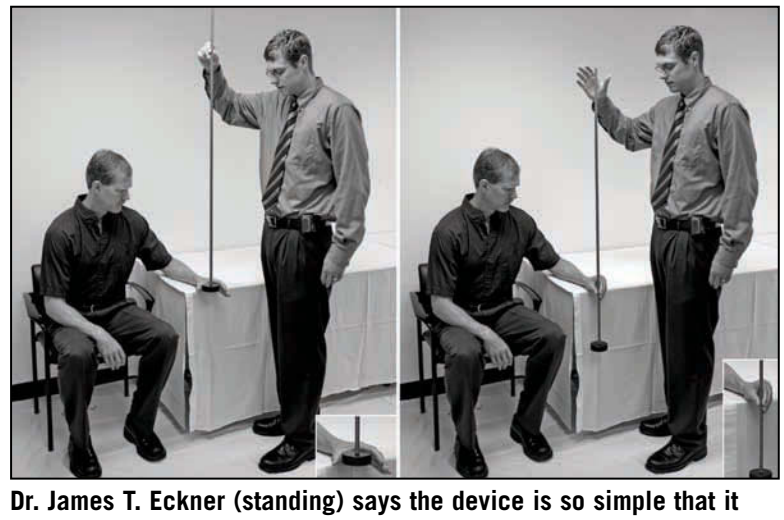
FROM THE AMERICAN ACADEMY OF NEUROLOGY

An extremely simple device that tests an athlete's reaction time is showing promise in diagnosing concussions, according to a study announced in advance of its scheduled presentation at the meeting in Toronto.

Seven of eight Division I athletes who had suffered a concussion showed significantly slowed reaction times with the device, Dr. James T. Eckner said in an interview. "It's actually very similar to an experiment that's done commonly in physics classrooms in high schools," said Dr. Eckner, of the department of physical medicine and rehabilitation at the University of Michigan, Ann Arbor. In that experiment, reaction times are judged by the speed with which people can catch a ruler dropped between their fingers.

The device "is a fancier ruler, essentially," Dr. Eckner said. "It's basically a dowel rod that we've coated in friction tape, and we've marked it in centimeter increments. And then at the base of it there's a little rubber disc, which is actually a hockey puck that it's embedded in."

The device is so simple that it has the potential of being used on the sidelines of a football game. The person being tested sits with his or her forearm resting on a table. The person administering the test holds the device so that the subject's hand is encircling, but not touching, the hockey puck. At a random moment the investigator drops the device, and the subject catches it as soon as he or she can.



COURTESY DR. JAMES T. ECKNER

Dr. James T. Eckner (standing) says the device is so simple that it could be used on the sidelines of a football game.

"We measure then how many centimeters it fell before they caught it, and then we use a simple physics equation for a body falling under the influence of gravity to convert that into how many milliseconds it fell for," Dr. Eckner said.

For the experiment, Dr. Eckner and his colleagues recruited 209 members of Division I football, wrestling, and soccer teams. Before the start of the season the investigators measured each athlete's normal baseline reaction time. During the course of the season, eight of the athletes suffered concussions diagnosed by a physician. The investigators tested those eight athletes within 72 hours of their injury. Seven of the eight athletes showed significant slowing of reaction. Their average reaction time increased from 193 milliseconds at the start of the season to 222 milliseconds after their injuries, a statistically significant difference.

Dr. Eckner said that in practice, a 10%-15% increase in the length of reaction time would likely be statistically significant and perhaps clinically significant as well.

"I think that our results are still a little bit preliminary," Dr. Eckner said. "They're all very encouraging, but the study we've got so far is fairly small."

The Foundation for Physical Medicine and Rehabilitation and the University of Michigan supported the study. ■

Recurrent Headache in Young May Be Tied to Vitamin D Deficiency

FROM THE ANNUAL MEETING OF THE AMERICAN HEADACHE SOCIETY

LOS ANGELES – Vitamin D deficiency was detected in 37% of 497 children and adolescents presenting to a tertiary care center for recurrent headache that required preventive treatment. Vitamin D insufficiency was found in 87%.

These results of routinely measuring baseline serum 25-hydroxyvitamin D (25[OH]D) levels at new patient visits or at follow-up visits suggest that pediatric patients with recurrent headaches may be at increased risk for vitamin D insufficiency or deficiency compared with the general healthy population, Dr. Hope L. O'Brien and her associates reported in a poster presentation at the meeting.

Vitamin D deficiency was defined as a serum 25(OH)D level of less than 20 ng/mL. Vitamin D insufficiency was defined as a level below 30 ng/mL.

Serum 25(OH)D levels averaged 24 ng/mL in patients presenting with episodic migraine and 23 ng/mL in patients presenting with chronic migraine, reported Dr. O'Brien of the University of Cincinnati.

Studies have suggested a link between low vitamin D levels and migraine or chronic tension-type headache in adults, but this may be the first study to assess this association in children and adolescents. Patients in the current study had a mean age of 14 years (range 4-25).

The implications of these findings are unclear, but it's possible that vitamin D supplementation might help improve headaches and overall health, Dr. O'Brien said. Studies in adults have linked low vitamin D levels with medical problems such as heart disease, diabetes, cancer, autoimmune disease, chronic pain, and osteoporosis, with some evidence suggesting poorer outcomes in patients with these problems and low vitamin D levels.

More studies are needed to confirm a relationship between vitamin D levels and headache frequency in children and adolescents and to explore whether vitamin supplementation may improve headache, she said.

Dr. O'Brien did not list any disclosures in her poster and did not respond to attempts to contact her.

–Sherry Boschert