Adding cognitive behavioral therapy to treatment of pediatric migraine improves relief of symptoms

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Among children and adolescents with chronic migraine, the use of cognitive behavioral therapy (CBT) resulted in greater reductions in headache frequency and migraine-related disability compared with headache education, according to a study appearing in the December 25 issue of *JAMA*.

"In adults, more than 2 percent of the population has chronic migraine and in children and adolescents the prevalence is up to 1.75 percent. In pediatric patients who seek care in headache specialty clinics, up to 69 percent have chronic migraine; however, there are no interventions approved by the U.S. Food and Drug Administration for the treatment of chronic migraine in young persons. As a result, current clinical practice is not evidence-based and quite variable," according to background information in the article.

Scott W. Powers, Ph.D., of Cincinnati Children's Hospital Medical Center, and colleagues randomized 135 participants (79 percent female) 10 to 17 years of age diagnosed with chronic migraine (≥ 15 days with headache/month) and a Pediatric Migraine Disability Assessment Score (PedMIDAS) greater than 20 points (disability score range: 0-10 for little to none, 11-30 for mild, 31-50 for moderate, >50 for severe) to CBT (n = 64) or headache education (n = 71). The study was conducted in the Headache Center at Cincinnati Children's Hospital between October 2006 and September 2012; 129 participants completed 20-week

follow-up and 124 completed 12-month follow-up. The interventions consisted of 10 CBT or 10 headache education sessions involving equivalent time and therapist attention; CBT included training in pain coping, modified to include a biofeedback component. Each group received amitriptyline; follow-up visits were conducted at 3, 6, 9, and 12 months.

On average, at the beginning of the trial, participants reported 21 of 28 days with a headache and a PedMIDAS of 68 points, indicating a severe grade of disability. From pretreatment to posttreatment, CBT resulted in a decrease of 11.5 headache days vs. 6.8 days with headache education. At 12-month follow-up, 86 percent of CBT participants had a 50 percent or greater reduction in days with headache vs. 69 percent of the headache education group; 88 percent of CBT participants had a PedMIDAS of less than 20 points (mild to no disability) vs. 76 percent of the headache education group.

"Now that there is strong evidence for CBT in headache management, it should be routinely offered [to younger people] as a first-line treatment for chronic migraine along with medications and not only as an add-on if medications are not found to be sufficiently effective. Also, CBT should be made more accessible to patients by inclusion as a covered service by health insurance as well as testing of alternate formats of delivery, such as using online or mobile formats, which can be offered as an option if in-person visits are a barrier," the authors write.

System barriers may affect the likelihood of CBT being implemented as a first-line treatment for pediatric chronic migraine, writes Mark Connelly, Ph.D., of Children's Mercy Hospitals and Clinics, Kansas City, in an accompanying editorial.

"Creative means of delivering CBT for pediatric chronic migraine (e.g., via telehealth or Internet-based programs, using behavioral health

consultants in primary care offices) will be necessary for reducing current access and referral barriers that could be encountered by many families and physicians. Widening the availability of interdisciplinary models of training and treatment delivery also will be important for helping ensure that children with chronic migraine routinely receive combination therapies rather than being referred for psychological therapy only after other approaches fail."

"Ideally with the efforts of the health care community and other relevant stakeholders, the suggestion by Powers et al to consider CBT along with medication as a first-line treatment for chronic migraine in children will be implemented into practice well before the typical translation gap. Additional studies are warranted, however, to identify methods of preventing chronic migraine development and to determine the medications and combination therapies that further maximize improvements in health and quality of life outcomes for children and adolescents with chronic migraine."

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