Section Editors

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Daily headache

What have we learned?

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WHAT WAS THE ARTICLE ABOUT? In “Clinical and prognostic subforms of new daily-persistent headache,” Dr. Robbins and colleagues¹ studied a very specific kind of headache called new daily-persistent headache (NDPH). Dr. Robbins and his group used their experience to carefully divide people with NDPH into 2 groups. The people in the first group had headaches that fit the definition of NDPH proposed by the International Classification of Headache Disorders (ICHD). They labeled this group NDPH-ICHD. In the second group, the people had headaches that had features of both NDPH and another kind of headache, migraine (table). They called this group NDPH-mf, the “mf” standing for migraine features. The reason they did this was to determine if there was a difference in the way that different kinds of NDPH might respond to medical treatment. Further, by following the group for a period of time, they could see how each type fared over time. In their editorial, Drs. Young and Swanson² describe some of the issues concerning headaches. There are many kinds of headaches. As we learn more, it has become clear that selecting the best treatment requires making the best possible diagnosis.

NDPH is defined as a headache. The pain is usually on both sides of the head (in 88%–93% of people with NDPH). The pain can be intermittent, but lasts more than 3 months. In some people, NDPH can last several years. Although a person could have had other types of headaches in his or her life, this one is different. Not only does it have a long duration, but most people can remember exactly when it started. Some people with NDPH describe “migraine features.” What this means is that they have the symptoms of NDPH, but also have symptoms that sound like migraine. For instance, common migraine symptoms include a headache that is throbbing. Migraine pain is usually on one side of the

head. A person with migraine may have sensitivity to lights or loud noises. They may also notice that their headache gets worse if they exert themselves too much.

Because of the overlap between these kinds of headaches, it is sometimes difficult to know how to best categorize a person’s headache. To many, this may seem very nitpicky. But for doctors, it can be very important to make a distinction between one kind of headache and another. One kind may respond better to specific kinds of medicines. One kind may be more likely to go away; in other words, it has a good prognosis. Knowing the kind of headache can therefore help a doctor to decide which medicine is best. When the doctor knows the headache type, he or she can also provide better advice: how to avoid triggers and how to manage the headache with relaxation techniques or special diets. Finally, this information can help the doctor to help the person understand what to expect. Will this go away? How long will I have this? What can I do to prevent it from happening again?

HOW WAS THE STUDY DONE? The authors accomplished this by looking at a group of people at one medical center in New York City: Montefiore Medical Center. They did this retrospectively. In other words, they looked at all patient charts where the diagnosis of NDPH had been made. The people in this group were patients at Montefiore between September 2005 and April 2009. All the people were adolescents or adults. They were all over 12 years old when they came to the office, though their headaches might have started at a younger age. As part of the usual office visit, each person answered the same questionnaire. In addition, each person had some type of brain imaging. They may also have had blood testing and a lumbar puncture (which is a way to study the fluid that goes around the brain and spinal cord). Once Dr. Robbins had identified the group of people with NDPH, he carefully reviewed the questionnaires and the results of medical testing. Using statistics, he looked for differences (or similarities) between the NDPH-ICHD and NDPH-mf groups.

Before discussing each group, it is important to understand what the whole group looked like. There

Table Different types of headache

	Common type
Vascular type	Migraine
Muscular contraction	Tension
Inflammatory	Sinus
Miscellaneous	Chronic daily headache

were 71 people in the study. Three-quarters (71%) were women. Four-fifths (80%) were white. About half (49.3%) described a family history of frequent headaches. On average, the age when the headaches started was 26–28 years. Because their headaches were so frequent and severe, almost half (45%) were using pain medications too much.

WHAT DID THE AUTHORS FIND? When Dr. Robbins et al. looked at each group, he found a few differences. First, there were more women who had NDPH-mf (82.5%) compared to those with NDPH-ICHD (58.1%). In the NDPH-mf group, there was a higher chance of also being depressed. A total of 47.5% of NDPH-mf patients reported depression, compared to 19.4% in the NDPH-ICHD group.

In addition, they found differences in how the groups responded to treatment. Although the results were not conclusive (they did not reach statistical significance), there were some important observations. For instance, 34/71 of the patients had at some point tried a group of medications called triptans. The NDPH-mf group responded more often (37.5%) to triptans compared to the NDPH-ICHD group, where 16.7% described relief with this medication. In addition, 23/71 people had undergone a nerve block for their severe headache. A nerve block is a medication that is injected near a nerve,

basically numbing the nerve. It is the same thing that happens when the dentist injects medication before a dental procedure. The NDPH-ICHD group responded to the nerve block much more often (88.9%) than the NDPH-mf group (42.9% responded to nerve block).

Finally, they found that more than half of the people continued to have headache for more than 2 years. This was also important because other researchers had reported that NDPH was a benign illness. In other words, other studies had suggested that up to 86% of people with NDPH stopped having their headache in less than 2 years.

Of course, no study is perfect. The authors acknowledge that the patients in their study may not represent all people with NDPH. For instance, most of the people in this study were white. How do African American or Asian people with NDPH do? All of the people in this study were in New York City. Perhaps there is something in the environment that contributed to the study results. One observation that could be important is that the people in this group reported headaches that started in either September or March. This is also the peak time when people have viral illnesses like the flu. Maybe there is a connection. Perhaps having the flu later causes NDPH. Future studies may help to clarify this.

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About headache

HEADACHE Headache is one of the most common reasons why people go to their doctor. There are several kinds of headache: vascular, tension, and inflammatory are just a few. Headaches can be disabling. They can affect how a person works or studies. When severe, headache can cause missed days at work or school. Developing an understanding of headache is the first step to finding a remedy.

DIFFERENT KINDS OF HEADACHE One of the best-studied kinds of vascular headache is migraine. About 12% of people in the United States have migraine. Migraine affects women about 3 times more than men. It usually starts in childhood or adolescence, but can sometimes start in a person's 20s or 30s. When a migraine occurs, it can last 3 to 72 hours.

Migraines usually cause pain that is on one side of the head. The pain is severe and throbbing. Often, when the migraine is present, a person becomes sensitive to bright lights or loud noises. They may become sick to their stomach and vomit. Physical exertion often makes the headache worse. As a result, many people with migraine will go to a darkened room and lie down.

Another kind of headache is due to muscle contraction. It is often called a tension headache. Unlike migraine, tension headaches usually cause pain on both sides of the head. The pain is constant (not throbbing). Most people describe the pain as a rubber band being wrapped around their head. Others describe pressure or squeezing. Tension headaches are very common, and usually start in adolescence. They tend to reach their peak in someone's 30s, and then get better. Tension headaches can be episodic, occurring up to 15 days each month, or they can be chronic, which means that they occur more than 15 days each month.

Another type of headache is called chronic daily headache (CDH). Within this category of headaches is new daily-persistent headache (NDPH). NDPH

causes pain that is on both sides of the head. The pain is continuous, and in some people, can last several years. Because of the way that it starts, many people can recall the exact date (or at least the month) on which the headache began. By definition, the headache must last at least 3 months before the diagnosis of NDPH can be made.

RESEARCH IN HEADACHE DISORDERS Although scientists can classify and characterize different kinds of headaches, they do not understand certain basic issues. For instance, no one knows exactly how a headache starts. The person experiences pain, but why? Is it because of a problem in the nerves? Perhaps the blood vessels are the cause. Or maybe headache is due to inflammation, which can be caused by stimulating certain kinds of cells in our skin. Some headaches, like migraines, run in families. This suggests that certain kinds of headaches are genetic. What is the gene? How does the gene work? Before scientists can develop better treatments, they need to better understand why headaches occur. The research carried out by Dr. Robbins and colleagues, which helps to better characterize headache, can be the first step in understanding specific kinds of headache. With this, scientists can look even closer, and ultimately develop better treatments.

FOR MORE INFORMATION

AAN.com for Patients & Caregivers

<http://patients.aan.com/gol/home>

American Pain Foundation

<http://www.painfoundation.org>

Migraine Research Foundation

<http://www.migraineresearchfoundation.org>

National Institute of Neurological Disorders and Stroke

www.ninds.nih.gov/disorder/headache

REFERENCES

1. Robbins MS, Grosberg BM, Napchan U, Crystal SC, Lipton RB. Clinical and prognostic subforms of new daily-persistent headache. *Neurology* 2010;74:1358–1364.
2. Young WB, Swanson JW. New daily-persistent headache: the switched-on headache. *Neurology* 2010;74:1338–1339.

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