

Key Points

1. Headaches are common among Chiari patients, but may be of different types
2. Study looked at Valsalva related headaches in 19 adults
3. More than half suffered from Valsalva headaches
4. Coughing, sexual activity, and physical effort were the most common triggers
5. Headaches lasted 11 minutes on average, but were significantly shorter for women than men
6. 80% had headaches in the back of the head and 60% in the front.

Definitions

occipital - having to do with the back of the head

Valsalva maneuver - forcing breath out against a closed airway; straining

cerebellar tonsils - portion of the cerebellum located at the bottom, so named because of their shape

cerebellum - part of the brain located at the bottom of the skull, near the opening to the spinal area; important for muscle control, movement, and balance

cerebrospinal fluid (CSF) - clear liquid in the brain and spinal cord, acts as a shock absorber

Chiari malformation I - condition where the cerebellar tonsils are displaced out of the skull area into the spinal area, causing compression of brain tissue and disruption of CSF flow

decompression surgery - general term used for any of several surgical techniques employed to create more space around a Chiari malformation and to relieve compression

syringomyelia - condition where a fluid filled cyst forms in the spinal cord

Characterizing Valsalva Induced Headaches in Chiari Patients

March 31st, 2011 -- Headaches are the most common symptom reported by Chiari patients, and in many ways are also the signature symptom of the condition. The classic Chiari headache is generally considered to be intense pain in the occipital region (the back of the head) that is triggered by straining (Valsalva maneuver), coughing, or physical activity, and usually does not last very long. However, people with Chiari often suffer from other types of headaches as well, such as CSF related pressure headaches, muscle induced tension headaches, and even migraines. And while headache is the most common symptom, they are less common in children, and a significant portion of Chiari patients - young and old - do not experience headaches at all.

In general, Chiari related headaches have not been extensively researched. While there have been a number of theories put forth to explain cough induced headaches, with recent focus on the pressure difference of the CSF in the spine and skull regions, we do not know definitively if this is this case. In fact, at the 2010 Conquer Chiari Research Conference, the idea was floated that the meninges of Chiari patients may be abnormal and in turn influence the development of headaches. Also poorly researched is the persistence of headaches after Chiari surgery. How common are they? Are the triggers the same? Do they feel differently?

[Editor's Note: *I continue to get headaches even 12 years after surgery. Although some of the triggers remain the same, and it still feels like the pressure has increased in my head, the pain is more generalized and I no longer get the throbbing in the back of my head (where they removed the bone).*

Chiari headaches offer a wide range of research questions for scientists to study, and researchers from Brazil recently published a short study which looked at triggers of Valsalva related headaches in Chiari patients. Specifically, the study involved 19 Chiari patients seen over the course of a year at their facility. The group included 10 men and 9 women ranging in age from 30 to 75 years. Chiari was defined via MRI as one cerebellar tonsil herniated at 5mm or greater, or both tonsils herniated at 3mm or or greater. Headaches were assessed at the initial visit using classification criteria of the International Headache Society.

The doctors found that slightly more than half of the small group (10) suffered from Valsalva related headaches. Not surprisingly, cough was one of the most common triggers (Table 1) with 60% of the headache sufferers reporting that coughing brought on headaches. Perhaps more surprisingly, something that is not discussed much in the Chiari literature, sexual activity, also was reported as a common trigger (6 of 10). Physical effort, sneezing, and laughing were also reported as triggers. The average duration of the Valsalva headaches was around 11 minutes, but interestingly the headaches for women were significantly shorter than for the men, 5 minutes versus 18 minutes respectively. The researchers offered no theories on what might explain this difference. Finally, 80% reported headaches in occipital region, while 60% reported pain the in the front of the head.

Although, this study is very small and doesn't draw any real conclusions, this type of observational research is interesting in its own right. As discussed elsewhere in this issue, Conquer Chiari intends to launch a large project, the Conquer Chiari Patient Database, to collect information such as this on thousands of patients in order to characterize and quantify how Chiari affects people.

Table 1: Precipitating Factors of Valsalva Related Headaches in 10 Chiari Patients

Factor	# With
Coughing	6
Sexual Activity	6
Physical Effort	5
Sneezing	1
Laughing	1

Related C&S News Articles:

[Chiari Accounts For Half Of All Cough Headaches](#)

[Study Explores The Chiari-Migraine Connection](#)

[What causes the dreaded Chiari cough headache?](#)

Source

Source: [Headache precipitated by Valsalva maneuvers in patients with congenital Chiari I malformation.](#) Martins HA, Ribas VR, Lima MD, Oliveira DA, Viana MT, Ribas KH, Valença MM. Arq Neuropsiquiatr. 2010 Jun;68(3):406-9.

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