

Valsalva Headaches & Blackouts Improve Most With Surgery

While the Chicago Chiari Outcome Scale (CCOS) continues to grow in popularity as a way to assess and compare surgical outcomes, from a patient's point of view its usefulness is limited in that it uses broad categories to generate an outcome score. In contrast, a recent publication from the UK focused on whether specific symptoms improved after surgery and found that valsalva headaches and blackouts improve the most. The study involved 129 adult Chiari patients without syringomyelia who had been followed for at least two years after surgery and for whom specific symptom information was available in the medical records. In addition, cases where imaging clearly showed inadequate decompression from surgery or significant additional anatomical abnormalities were excluded. As expected the group reported a wide variety of symptoms. The table below shows symptoms reported by at least 10 patients and the percentage of those suffering from the symptom:

Valsalva Headache	78%
Visual Disturbances	33%
Dizziness/Balance Issues	24%
Sensory - Arms	24%
Blackouts	17%
Non-specific Headaches	16%
Sensory - Legs	14%
Body Symptoms	9%
Cognitive	9%
Gait Disturbance	9%

Less common symptoms included Nausea/Vomiting, Swallowing Issues, Motor Problems, Neck Pain, Speech Disturbances, Seizures, and Clumsiness. Interestingly, 77% of patients with blackouts reported the blackouts were cured and an additional 9% said they improved. Similarly, 74% of patients with Valsalva headaches reported the headaches were cured or improved. About half of patients with visual disturbances, balance issues, and sensory issues in the arms reported these symptoms improved. All of these symptoms were found to be significantly improved from a statistical point of view. However for the rest of the symptoms, less than half of the patients reported any improvement in the specific symptoms. The results add support to what may be an emerging trend of surgeons returning to a more conservative view of the effectiveness of decompression surgery. In the early days Chiari surgery was focused on relieving Valsalva headaches and stopping the progression of syrinxes. As time went on and it became clear that Chiari patients were suffering from a wide variety of symptoms this focus expanded with the hope that the additional symptoms could also be addressed surgically. However, more than one study has found this to not be the case and some surgeons are beginning to advise their patients accordingly. It is important to keep in mind that this study involved Chiari patients without syringomyelia and likely does not apply to patients with both. Hopefully more and larger symptom specific studies will be published going forward as this is the information that is most useful to patients.

Source: Symptom outcome after craniovertebral decompression for Chiari type 1 malformation without syringomyelia. Pepper J, Elhabal A, Tsermoulas G, Flint G. *Acta Neurochir (Wien)*. 2020 Oct 31. doi: 10.1007/s00701-020-04631-z. Online ahead of print.

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