

Study Looks at Characteristics of Revision Surgeries

A French group has published a report on their 10-year experience with Chiari revision surgeries. Between 2010-2019, the group performed 311 Chiari surgeries, of which 35 (11%) were revision procedures. A number of these were patients originally operated on at other institutions, so the re-operation rate for the authors was 7%. The average time to initial revision surgery was 28 months, but 40% of the cases occurred in the first year and were mainly due to initial surgical complications such as pseudomeningocele, CSF leaks, and hydrocephalus. Revision procedures performed after the first year were mainly due to arachnoid scarring.

Symptomatically, the most common reasons for revision surgery were:

- Sensory/motor deficits (40%)
- Pseudomeningocele/CSF leak (29%)
- Persistent headaches (17%)
- Neuropathic pain (14%)

It is worth noting that nearly three quarters of the revision cases also had a syrinx. The most common revision procedure was replacing the dural patch. Other common procedures were removing arachnoid adhesions, additional bone removal, and shrinking the cerebellar tonsils. About 1 in 4 first revision surgeries involved diverting spinal fluid by placing a shunt.

Sixty percent (of the revision patients) had one revision, but 8 patients had 4 or more additional procedures. Interestingly, every patient who required more than one revision procedure eventually had a shunt placed to divert spinal fluid. While the revision rate for this study was 7-11%, data from the Chiari1000 shows it might be as high as 17% for the Chiari community at large. However, among the 800+ Chiari 1000 respondents who have had surgery, only 0.6% required 4 or more total procedures, compared to 2.5% in this study who required 4 or more revisions.

Source: Surgical Management after Chiari Decompression Failure: Craniovertebral Junction Revision versus Shunting Strategies. Knafo S, Malcoci M, Morar S, Parker F, Aghakhani N. J Clin Med. 2022 Jun 10;11(12):3334. doi: 10.3390/jcm11123334.

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Note: The full text of this journal paper is available for free at: <https://www.mdpi.com/2077-0383/11/12/3334>

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