

Scar Tissue Found In Nearly All Revision Surgeries

Multiple Chiari surgeries are an unfortunate reality for a significant number of Chiari patients. In fact, over 25% of Chiari 1000 participants reported having multiple Chiari related surgeries. For some people the initial surgery doesn't work at all, while for others there is an early period of relief, followed by symptoms coming back months or years later. A recent study in the British Journal of Neurosurgery looked in detail at the revision surgeries performed at one institution and found that in nearly 90% of the cases, arachnoid scar tissue had developed and was blocking the normal flow of cerebrospinal fluid (CSF) between the brain and spine areas. The review involved 35 adult cases and revealed a number of other interesting findings. Of the 35, seven had experienced no improvement in symptoms after the initial surgery but 28 had significant improvement which lasted an average of 4 years before symptoms returned. Interestingly the complication rate among the group for their initial surgery was fairly high at 42% and 13 of the patients had already had a follow-on procedure to insert a shunt. The specific techniques used in the revision surgery were tailored to each patient with the common goal of restoring normal CSF flow. As mentioned previously, 31 of the 35 patients were found to have scarring which was blocking the CSF flow. In twelve of the cases, the dural graft used in the initial surgery had actually become part of the blockage problem. Surprisingly (since they were adult patients), bone that had been removed initially had actually regrown in two of the cases and was again causing compression. Three months after the revision surgery 32 of the 35 reported significant improvements in their symptoms; however at the one year follow up nine more of the patients reported symptoms coming back. This means the one year success rate for the revision surgery was only 66%, with no clear path forward for those patients whose symptoms did not improve or came back yet again.

Source: Adikarige Silva , Gopiga Thanabalasundaram , Ben Wilkinson , Georgios Tsermoulas & Graham Flint (2020): Experience with revision craniovertebral decompression in adult patients with Chiari malformation type 1, with or without syringomyelia, British Journal of Neurosurgery, DOI: 10.1080/02688697.2020.1823935

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