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CONQUER CHIARI
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New Surgical Technique Creates More Space

While there has been a relatively large number of research studies focused on whether to open the dura during surgery, less attention has been paid to varying approaches involving the cerebellar tonsils themselves. Some surgeons argue against manipulating the tonsils in any way because it is brain tissue. Others believe that reducing the tonsils through burning or cutting helps the natural flow of spinal fluid and point out that the tonsils tissue is usually scarred anyway. Now, a small pilot study from a group of Chinese doctors proposes that a combination of tonsil coagulation (burning) and suspension may be an even better approach. The study focused on 42 adults (34 with syrinxes) who underwent one of 3 different surgical approaches: standard decompression with duraplasty (12); decompression with duraplasty and tonsillar coagulation (13); and decompression with duraplasty, tonsillar coagulation, and tonsillar suspension (17). For the tonsillar suspension, after shrinking the tonsils the surgeons sutured them into an elevated position. To compare the outcomes, they used the Neck Disability Index, the Chicago Chiari Outcome Score (CCOS), and imaging. For the Neck Disability Index, there were no significant differences in the scores of the three groups before surgery but post-surgery the suspension group had significantly lower scores (better) than both of the other groups. For CCOS, while the suspension group had the highest scores (better), the differences were not considered statistically significant. This could be due to the small number of patients in each group. The most dramatic difference was in syrinx reduction. Before surgery there was no significant difference in the size of the syrinxes between groups, but post-surgically the suspension group had the largest reduction in syrinx size. This is not surprising given that other research has shown a strong link between CSF restriction and syrinx formation. The authors point out that although the groups were balanced by age and gender they were not randomized and that the study is further limited by the small number of participants and a moderate follow-up time of 20 months. They further stress this was only a pilot study and additional, larger, controlled studies are required.

Source: A Combinatorial Approach with Cerebellar Tonsil Suspension to Treating Symptomatic Chiari Malformation Type I in Adults: A Retrospective Study. Wang L, Zhao H, Zhu W, Yan P, Teng YD. World Neurosurg. 2020 Mar 12:S1878-8750(20)30519-2. doi: 10.1016/j.wneu.2020.02.184.

Conquer Chiari's research updates highlight and summarize interesting publications from the medical literature while providing background and context. The summaries do contain some medical terminology and assume a general understanding of Chiari. Introductory information and many more research articles can be found in the Conquer Chiari Library.