

New "Baklava Dough" Surgical Technique Shows Promise

A newly published study from Turkey describes a novel surgical approach for treating Chiari malformation that may provide adequate decompression while avoiding some of the complications associated with fully opening the dura. Researchers have named the procedure the "Baklava Dough" dural thinning technique because the dura is thinned until it becomes nearly translucent, resembling the thin layers of dough used in the traditional pastry.

The authors suggest that the procedure may provide a middle ground between bone-only decompression and traditional duraplasty. Previous studies have shown that fully opening the dura can lower re-operation rates but may increase the risk of complications such as CSF leaks. Meanwhile bone-only decompression has a higher risk of needing additional surgery, but generally results in lower complication rates. By thinning rather than opening the dura, the Baklava Dough technique aims to improve CSF dynamics while minimizing surgical risks.

The study evaluated 32 adults with Chiari malformation type I who underwent posterior fossa decompression between 2018 and 2024. Rather than opening the dura and performing a duraplasty, surgeons carefully removed the outer dural layer and then microscopically thinned the inner layer until cerebrospinal fluid (CSF) pulsations could be seen through it. The goal was to improve CSF flow and increase the flexibility of tissues at the craniocervical junction while preserving dural integrity. The surgery itself was less invasive than traditional decompression procedures, with a smaller initial incision, a smaller piece of skull removed, and the dura never intentionally fully opened.

The results were encouraging. Headache severity improved dramatically, with average pain scores dropping from 7.2 to 1.4 on a 10-point scale. Significant improvements were also seen in neck pain, arm pain, back pain, numbness, gait problems, swallowing difficulties, hoarseness, and sleep apnea symptoms. Among patients who completed patient-reported outcome surveys, 96% achieved a "good" outcome score, and 61% reported being "significantly improved" after surgery. The study also found substantial radiological improvement. Syringomyelia was present in 13 patients before surgery. One year later, 12 of those 13 patients (92%) showed syrinx regression, with average syrinx diameter decreasing from 8 mm to 4 mm. No patient experienced progression of their syrinx. As the surgeons had hoped there were no CSF leaks, pseudomeningoceles, or wound infections. In addition, none of the patients required additional surgery during the follow-up period.

This is not the first study which tried to find a middle ground when it comes to opening the dura. Other surgeons have suggested scoring the dura and even thinning it similar to what was done here. However, this is likely the most creatively named.

Source: Biçeroğlu H, Erol A, Akhbari M, Bölük MS, Yurtseven T. A One-Finger-Width "Baklava Dough" Dural Thinning Technique in Dura-Preserving Posterior Fossa Decompression for Chiari Type I Malformation. World Neurosurgery. Accepted June 2026.

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