

results with symptom or syrinx resolution, complications, and need for reoperations. Since there was no class I evidence to support the use of either PFD or PFDD, either approach may be used as a first-line treatment for CIM.

Question 3-2. In patients with CIM, is cerebellar tonsil reduction beneficial?

Recommendation: In patients undergoing PFD surgery for treatment of CIM and syrinx, surgeons may perform resection or reduction of cerebellar tonsil tissue to improve syrinx and/or symptoms.

Strength of recommendation: Grade C

Several retrospective studies and a single prospective study assessed outcomes after CIM decompression with or without manipulation of the cerebellar tonsils. All studies included for review considered syrinx resolution as the primary outcome, therefore an independent assessment of clinical symptom resolution was not possible. Accordingly, this recommendation included syringomyelia reduction as the outcome. Some studies reported better syrinx resolution with tonsil manipulation, while other studies reported higher complication rates with tonsil manipulation. Overall, there was not an obvious benefit or harm from tonsil manipulation apparent across studies.

Class III Evidence

There were 10 studies that directly compared CIM PFDD with and without manipulation of the cerebellar tonsils (including tonsil dissection, resection, cauterization, or some combination thereof). In 6 studies, there was no difference in outcomes with either option.^{25–30} In 3 studies,^{17,31,32} resolution of syringomyelia was more likely when tonsil manipulation was performed. Conversely, 1 study suggested patients who did not undergo tonsil manipulation had a higher likelihood of resolution of syringomyelia.³³

Seven studies^{17,25,28,29,31–33} reported no difference in complication rates, regardless of tonsillar manipulation, while 3 studies reported higher complication rates with tonsil manipulation.^{26,27,30} In the single prospective and nonrandomized study, no difference in outcomes or complications was reported.²⁹

Question 3-3. Is there a role for IONM in patients undergoing decompression for CIM?

Recommendation: IONM in patients undergoing decompression for CIM may be used during surgery.

Strength of recommendation: Grade C

All studies met the criteria for class III evidence. None met the criteria for class II or I evidence.

Class III Evidence

Anderson et al³⁴ performed a retrospective study to determine if intraoperative brainstem auditory evoked potentials (BAEPs) changes might determine the extent of decompression