

More Data on Pregnancy and Chiari

Pregnancy and Chiari is always a popular topic for Conquer Chiari's Research Updates, and now a new study out of Chicago adds to the growing body of evidence that pregnancy and delivery for women with Chiari can be safely managed. Concerns around Chiari and delivery are generally two-fold. First, that the Valsalva aspect of pushing in a vaginal delivery can worsen symptoms and second, that neuraxial anesthesia – meaning an epidural or spinal – involves the risk of a dural tear which could result in further herniation of the cerebellar tonsils.

This study looked at medical records over a 14-year period to identify deliveries that involved women who either had Chiari at the time of delivery but hadn't had decompression surgery, or women who were diagnosed at some point in time after the delivery. The researchers identified 36 women and 76 births, of which 32 were vaginal and 44 cesarean. Neuraxial anesthesia was used in 78.9% of the deliveries, general anesthesia in 11.8%, and no anesthesia in 9.2%. In 40 of the deliveries (53%) the women had not yet been diagnosed with Chiari.

Although the available imaging was limited, it showed no real change in either tonsillar position or syrinx size after delivery. In addition, the clinical records indicated that only two patients experienced worse symptoms shortly after giving birth. Both cases involved cesarean deliveries with neuraxial anesthesia and resolved fairly quickly.

However, the data from this study needs to be interpreted with caution. First, we don't know if the doctors essentially steered patients they thought were at risk of getting worse (for example with large herniations) towards cesarean deliveries with general anesthesia. This means we can't conclude that the choice of delivery and anesthesia aren't important for women with Chiari. Second, it's not clear if these choices affect the chances of becoming symptomatic at some point in time in the future, as nearly half of these women were diagnosed more than a year after giving birth. Although it is interesting to note that the average age of delivery in this study was 25 while the average age for a Chiari diagnosis for women is 33, so it could be that many of these women would have become symptomatic anyway.

Despite these limitations, it is encouraging to see a growing body of evidence that in general pregnancy and delivery can be safely managed for Chiari women.

Source: Pulido S, Huang J, Mendoza-Elias N, Das P. Maternal, Clinical, and Radiographic Outcomes: A Retrospective Analysis of Anesthesia and Delivery Modality in Chiari I Malformation. *Neurosurgery*. Published online February 7, 2025. doi:10.1227/neu.0000000000003367

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