

Sleep Disordered Breathing Common In Pediatric Chiari

A large study from the University of Alabama found that sleep disordered breathing (SDB) is common in pediatric Chiari, and in some cases can even be the only recognizable symptom. Sleep disordered breathing is a catch-all term that refers to any type of breathing difficulty during sleep. This can range from snoring to sleep apnea, where someone repeatedly stops breathing for short periods of time. The link between sleep apnea and Chiari has been reported on previously, but not with a group this large.

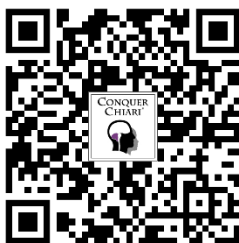
The study involved nearly 1,000 pediatric Chiari cases seen over a twenty-year period. Of these 310 had been referred for a formal overnight sleep study. That group was comprised of slightly more boys (54%) than girls (46%) and had an average age of 7 years. The most common reasons for the sleep study referrals were the Chiari diagnosis, snoring, and daytime drowsiness.

Out of the 310 children who underwent formal sleep studies, nearly half (47.4%) were found to have some type of sleep disordered breathing as noted in the test results. This translated back to 15% of the total Chiari children seen at the facility. Of those diagnosed with SDB, 33% had central sleep apnea where the brain doesn't send the proper signals to control breathing during sleep. An additional 27% percent had obstructive sleep apnea, where the upper airway becomes physically obstructed during sleep thereby blocking the flow of air, and 9% percent had mixed apnea which is a combination of both.

Interestingly, 47 of the children tested were originally considered to have no symptoms, yet more than half of them were found to have SDB. Although most of the children who underwent decompression surgery did not get a post-surgical sleep study, 34 of them did. Among those children, the average apnea index – which is the number of times per hour someone stops breathing – was reduced from 6.5 to 1.8, representing a significant improvement.

Source: Sleep-disordered breathing in children with Chiari type I malformation. Jarrell M, Caudill C, Haji F, Leon T, Rozzelle CJ, Maddox MH, Rocque BG. J Neurosurg Pediatr. 2024 Jul 12:1-9. doi: 10.3171/2024.5.PEDS24105. Online ahead of print. PMID: 38996390

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