Pseudomeningocele Negatively Effects Surgical Outcome in Adults

February 14th, 2014 - Chiari patients are always conscious of how to manage their life, both before and after decompression surgery. As so many are aware, encountering and controlling discomfort can be somewhat of a difficulty, but as reported by researchers at Vanderbilt University, when complications of decompression surgery occur, specifically the formation of a pseudomeningocele, improvement after surgery can be limited.

A pseudomeningocele is an abnormal collection of spinal fluid which can form from the dura being opened as part of Chiari surgery. In general, a pseudomeningocele can be monitored to see if it resolves on its own, temporarily drained, addressed by tightening the closure of the dura, or by installing a shunt.

The Vanderbilt study involved fifty adult patients, who were contacted to assess their preoperational and post-operational experiences one year after surgery. Specifically, nine established scales and instruments were used to assess pain, disability, and quality of life at baseline, and one year after surgery.

The patient group was comprised of 36 women and 14 men, with an average age of 38 years. Twelve (24%) patients reported that they had some form of respiratory disease, 12 (24%) suffered from depression, 7 (14%) had heart disease, and 17 (34%) currently smoked. Additionally, spinal cord disease symptoms were present in 20 (40%) patients, a syrinx was diagnosed in an additional 20 (40%), and 13 (26%) had minimal nerve impairment within the brain.

Post-operatively, overall, 33 (66%) patients confirmed they felt better, 6 (12%) felt the same, and 11 (22%) complained their condition was worse. However, there was a striking difference in outcomes between patients who had developed a pseudomeningocele and those who hadn’t.

Specifically, eight to sixteen days after decompression, nine patients (18%) acquired a symptomatic pseudomeningocele. After 1-year, Dr. Parker and his team reported that those who suffered from postoperative pseudomeningocele only had improvements in headache and headache-related disability; remaining aspects such as neck pain, neck-associated disability, quality of life, personal health status, depression, and spinal cord ailments did not improve. Unfortunately, these results indicate that a symptomatic pseudomeningocele, one of the more common surgical complications, significantly decreases the likelihood of a full recovery.

Although the results appear strong, the authors note that the study is limited in a number of ways. First, not all the patients underwent the exact same surgical procedure, and the potential effect that has on the data is not clear. In addition, the precise mechanism by which the pseudomeningocele negatively affected outcomes is beyond the scope of the study. However, even given these limitations, the data is strong enough to add fuel to the debate over bone only decompression.

The authors also discuss the merits and drawbacks of extradural, or bone only decompression, which has been reported on extensively by Conquer Chiari. In summary, by not opening the dura, the risk of complications – such as pseudomeningocele – goes down. However, research has also shown that the need for additional surgery goes up. This tradeoff can create a difficult choice for patients and their doctors.