

Definitions

cerebellar tonsils - portion of the cerebellum located at the bottom, so named because of their shape

cerebellum - part of the brain located at the bottom of the skull, near the opening to the spinal area; important for muscle control, movement, and balance

cerebrospinal fluid (CSF) - clear liquid which surrounds, and protects, the brain and spinal cord

Chiari malformation - condition where the cerebellar tonsils are displaced out of the skull area into the spinal area, causing compression of brain tissue and disruption of CSF flow

decompression surgery - common term for any of several variations of a surgical procedure to alleviate a Chiari malformation

laminectomy - surgical removal of part (the bony arch) of one or more vertebrae

magnetic resonance imaging (MRI) - diagnostic test which uses a large magnet to create images of internal body parts

Spinal Realignment Resolves Chiari Symptoms

Case Studies is a feature designed to highlight interesting patient cases reported in the research. Given the lack of knowledge about CM/SM, much of the published research comes in the form of case studies - doctors describing one or two patients they have seen and treated - as opposed to rigorous scientific studies. While this type of publication doesn't advance the scientific cause as much, it does give us a window into some of the issues surrounding CM/SM, including lasting side effects and related conditions. And hopefully, some of our readers will say, "Hey, that's just like me!" and know they are not alone in what they are going through.

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An Unusual Presentation And Resolution Of Syringomyelia After Cervical Spine Injury

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Journal: Journal of Neurosurgery: Spine, December, 2005

Introduction: Milhorat's landmark study of Chiari reported that 24% of patients identified trauma as a precipitating event for their symptoms. However, the role that trauma plays in triggering, or worsening symptoms is not well understood.

Patient: 43 year old man was in a roll-over auto accident and suffered a neck injury. Initially had slight weakness in his left arm, hand, and legs. X-rays and CT's revealed damage to his cervical vertebrae. Two hours later he experienced a dramatic worsening of symptoms. A second exam showed significant weakness in his arm/hands. MRI revealed Chiari and a syrinx from C3-T1.

Treatment: Surgeons focused on fixing the damage to and the alignment of his spine.

Outcome: Experienced almost immediate relief from his neurological symptoms. Three months later he was almost fully recovered and MRI revealed the syrinx had collapsed. Two years later, he is still doing well.

Author's Discussion: The authors believe that in this case, the sudden worsening of his symptoms was not due to a problem at the level of the Chiari, but rather to a change at the level of the syrinx. Research has shown that trauma can lead to temporary blockage of certain veins in the spinal region, which this patient demonstrated. They believe that this led to an increase in venous pressure which disrupted CSF flow and suddenly changed the syrinx.

Editor's Discussion: It is interesting that in this case the authors at least speculate as to why the patient's symptoms got worse with trauma. It is also interesting that they did not perform a Chiari decompression, but rather fixed the spinal alignment which was altered from the accident. It may be that there is not one single link between trauma and Chiari/SM symptoms, but several different possibilities, based on the specifics of the trauma itself.

--Rick Labuda

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