

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

cervical - the upper part of the spine; the neck area

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

incontinence - the inability to control one's bowels or bladder

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

multiple sclerosis (MS) - disease of the brain and spinal cord in which the coverings of nerve fibers are slowly destroyed

neonatologist - a doctor who specializes in treating high-risk and complex cases involving newborns

plaque - the scarring of neural tissue

spinal anesthesia - procedure which involves injecting a pain killer directly into the spinal area

syringomyelia (SM) - neurological condition where a fluid filled cyst forms in the spinal cord

syrinx - fluid filled cyst in the spinal cord

thoracic - the middle part of the spine; chest area

vertigo - dizziness

Link With MS; Giving Birth With Chiari

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.

CASE 1: Link With MS

Reported In: Neurology, July 2004

Doctors: Dr James Charles et al.; New Jersey School of Medicine

Patient:

- 48 year old woman
- Progressive weakening of legs, incontinence, tingling in toes
- Neurological exam revealed abnormal gait and reflexes
- Blood tests were normal
- CSF tests were abnormal
- Six years earlier she had pain in her left arm, but MRI and other tests didn't find anything
- Brain MRI this time showed several lesions in the brain suggestive of Multiple Sclerosis (MS)
- Spinal MRI showed a thoracic syrinx from T7-T10

Observations:

- Although her symptoms were likely due to the syrinx, it is also likely that she has MS
- Some researchers have noted an association between MS and syringomyelia, but MS is not routinely checked for when a syrinx is found
- In this case it is not clear if the syrinx and MS are related or just coincidental
- Since the patient did not have Chiari, and there was no history of trauma, the authors believe that plaque build-up from the MS could have caused the syrinx in this case
- Authors go on to suggest that MS be considered in some cases of syringomyelia

Editor's Note: *It is interesting to note that MS is one of the most highly funded diseases (meaning Federal research dollars) and also one of the most widely recognized by the general public. That there may be a link to syringomyelia, one of the least funded and recognized, strikes me as somewhat ironic.*

CASE 2: Giving Birth With Chiari

Reported In: Canadian Journal of Anesthesia, Jun-Jul 2004, Letter to the Editor

Doctors: Dr. Krzysztof Kuczkowski; San Diego, CA

Patient:

- 35 year old woman, first pregnancy
- Mildly symptomatic Chiari
- Symptoms included headache, vertigo, and some numbness in arms
- Treated by a multi-disciplinary team including an obstetrician, an obstetric anesthesiologist, a neurologist, and a neonatologist
- Doctors were concerned about the stress of labor aggravating Chiari symptoms

- Elective C-section was performed with a spinal anesthesia
- Mother's symptoms did not get worse after delivery

Observations:

- There are several concerns surrounding labor and Chiari
- The stress and strain of pushing can aggravate Chiari symptoms (because it elevates the pressure inside the mother's skull)
- There is some controversy surrounding what type of anesthesia to use; some doctors have reported that spinal anesthesia can worsen symptoms, while others have reported it is safe to use
- Authors suggest a careful, multi-disciplinary approach to managing labor complicated by the mother having Chiari

Ed Note: *This newsletter has published several pieces on Chiari and labor issues. While there are risks, and still controversies, the published literature seems to indicate that when carefully managed, the risks can be minimized. It is also interesting to note that there is anecdotal evidence that labor and delivery have sparked symptoms in previously asymptomatic women.*

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