Research Update | April, 2023

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Breaking the Pain Barrier: Spinal Cord Stimulator Effective in Treating Syrinx Related Pain in a Teen

Many patients know firsthand about the problems that a syrinx can cause. Specifically, the fluid that builds in the tissue of the spinal cord can damage nerve roots leading to neuropathic pain (pain due to nerve damage), muscle weakness, and loss of sensation in the arms and/or legs depending on where the syrinx is located. Making matters worse, while surgery can stop a syrinx from getting bigger, and may even make it shrink in size, the damage that it causes can linger and severely impact a patient's quality of life.

A recent case study tells just such a story, but with a hopeful ending. The report describes a 14-year-old girl who began to suffer from Chiari type headaches, neck pain, shoulder pain, and left arm pain that extended all the way to her thumb. She had trouble sleeping, began missing school, and made frequent trips to the ER in search of relief. Imaging revealed Chiari and a cervical syrinx, and she subsequently underwent surgery. While the surgery provided initial relief from the headaches and pain, after a couple of weeks her arm pain returned and was even worse than before the surgery.

The doctors tried prescribing gabapentin, but the side effects (drowsiness) were too much for the teen and she stopped taking it. Eventually, imaging showed that her syrinx had almost completely resolved but the arm pain continued. Over time, she gained weight due to inactivity, her school performance slipped, and she became clinically depressed. Her doctors decided to try implanting a spinal cord stimulator to help with the pain. Spinal cord stimulators are small devices that are surgically implanted and provide small electrical charges to the spine. While they are commonly used to help patients after failed back surgery, how they work exactly isn't well understood.

Fortunately, in this case it did work. After six months her pain and depression were significantly better and her quality of life improved. The medical literature does have reports of spinal cord stimulators being used in adults to treat syrinx related neuropathic pain, but the authors believe this is the first reported case of the successful use of one in a pediatric patient. They believe that while neuropathic pain is less common in pediatric patients, for carefully selected cases, spinal cord stimulators should be considered as a post-surgical treatment option.

Source: Schatmeyer BA, Dodin R, Kinsman M, Garcia D. Spinal cord stimulator for the treatment of central neuropathic pain secondary to cervical syringomyelia: illustrative case. J Neurosurg Case Lessons. 2022 Aug 8;4(6):CASE22226. doi: 10.3171/CASE22226. PMID: 36088568.

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