

Poster presentation

Neurologic recovery with conservative management in symptomatic tethered cord

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from 52nd Annual Meeting of the Society for Research into Hydrocephalus and Spina Bifida
Providence, RI, USA. 11–14 June 2008

Published: 3 February 2009

Cerebrospinal Fluid Research 2009, **6**(Suppl 1):S51 doi:10.1186/1743-8454-6-S1-S51

This abstract is available from: <http://www.cerebrospinalfluidresearch.com/content/6/S1/S51>

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Background

We present a case of a male adolescent with Spina Bifida who had new gait difficulty and fatigue following a fall. On physical exam, he had new right quadriceps weakness and progression of his hip flexion contractures. Initial studies included radiographs of his lumbar spine and pelvis, which revealed no acute bony injury or a significant change of his chronic bilateral dislocated hips. Magnetic resonance imaging (MRI) of the brain, cervical spine, and lumbar spine were obtained. MRI of the brain and cervical spine showed no definitive etiology. MRI of the lumbar spine showed a small syrinx from T9 to the conus and changes suggestive of a tethered cord. Neurosurgical evaluation concluded with a diagnosis of symptomatic tethered cord and surgical release was recommended. However, the patient was hesitant to undergo surgery. On follow-up exam, he had new bilateral hip adductor weakness increasing right quadriceps weakness. Further studies included electrophysiologic testing which showed severe ongoing denervation in the right L2–L4 innervated muscles and an MRI of bilateral thighs, which did not show any abnormalities of the adductor or quadriceps muscles. While the MRI of the lumbar spine did show a low lying conus with thickened filum terminale, it did not show other significant spinal or disc abnormalities to correlate with the electrophysiologic results. He was initiated on a physical therapy program.

Materials and methods

This is a case presentation with a chart and literature review.

Results

On four-month follow-up, he had significant improvement in his hip flexion contractures, strength, and ambulation. By one year he had returned to his baseline function.

Conclusion

MRI evidence of tethered cord is common in individuals with Spina Bifida. However, surgical intervention remains controversial and does not necessarily lead to neurologic improvement. This is a case of a patient with MRI evidence of a tethered cord and new neurological deficits, who recovered neurologic function with conservative management.