Inability to Ambulate Post Syringo Subarachnoid Shunt: A Case Report

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Case Description

32 year-old male with history of hydrocephalus status post ventriculoperitoneal shunt, deafness, developmental delay, thoracic laminectomies, and syringomyelia (C2-conus) with multiple syringo-subarachnoid shunts, presented to acute rehabilitation following a T10-11 syringo-subarachnoid shunt. 3 days post admission, patient was noted to have increasing lower extremity weakness, urinary retention, inability to ambulate and increasing spasticity. MRI revealed increased size of the thoracic syrinx with mass effect. Patient underwent revision surgery with expansile duraplasty for a failed thoracic shunt.

Discussion

Syringomyelia is a chronic progressive disorder in which longitudinal cavities form in the central spinal cord. As the syrinx expands, it compresses the spinal cord from resulting in pain, spasticity, and weakness. Although most syrinx present at birth, symptoms usually begin between the ages of 25-40. Most often the syrinx is small and localized only in the cervical cord, however in rare cases may extend down the length of the spinal cord to the conus. The location and size of the syrinx correlates with severity of symptoms. Occasionally, an extensive syrinx can be observed with limited functional impairment, suggesting an element of spinal cord plasticity for slowly enlarging malformations. In this instance a large syrinx was possibly acquired secondary to hydrocephalus causing pressure on the cerebellar tonsils, mimicking a Chiari-1 malformation. The syrinx expanded secondary to a failed T10-11 syringo-subarachnoid shunt, resulting in increased pain, spasticity, and motor weakness.

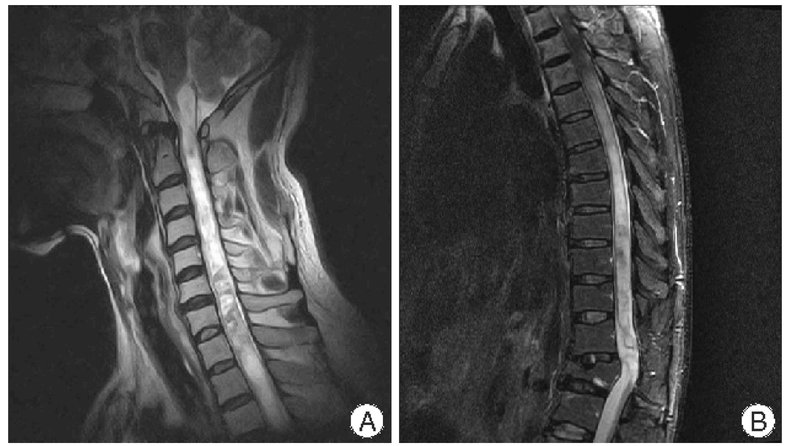

Figure 1. Magnetic resonance images of the cervical (A) and thoracic spine (B) reveal the presence of a huge syrinx extending from the medulla to the L1 level.

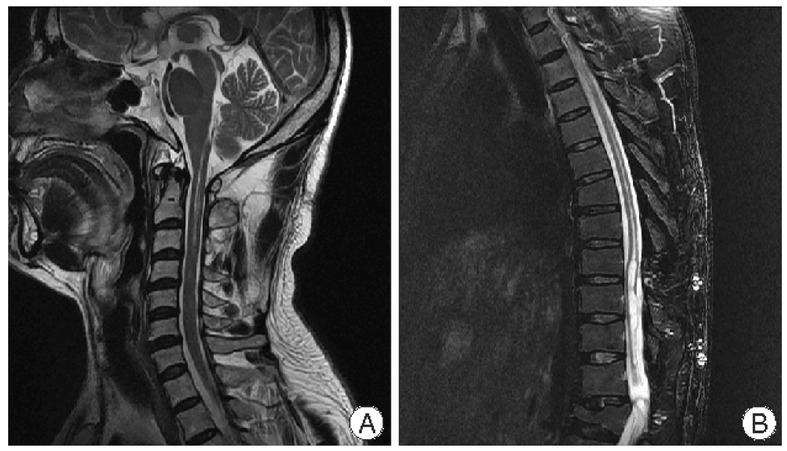

Figure 2. Postoperative magnetic resonance images of cervical (A) and thoracic (B) at 27 months after the surgery show considerable reduction in the size of the syringomyelic cavity.

Conclusion

This case warrants review as it documents the importance of early recognition and timely surgical intervention to avoid serious complications in the setting of a rapidly expanding syrinx. Symptoms suggestive of expansion of syrinx include progressive weakness, pain, bowel and bladder dysfunction, or increased spasticity.

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*Images do not reflect the condition of the patient and are for illustration purposes