



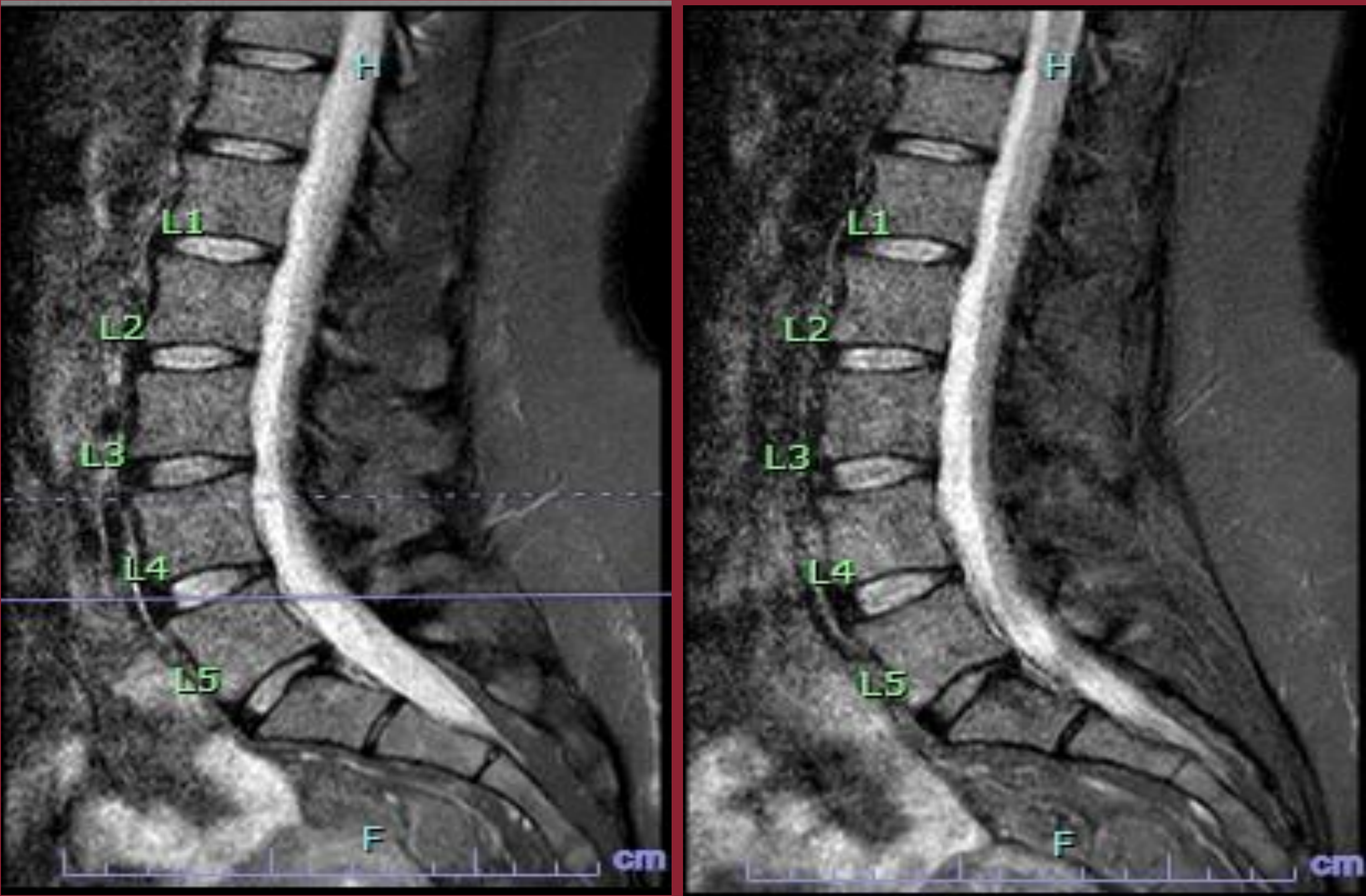
Introduction

- Tethered cord syndrome (TCS) is common in children but rare in adults.
- Adult TCS, as a cause of neurological complications that occur after spinal anesthesia, has been rarely reported.

Case Report

- 33 years old lady, with history of chronic lower extremities pain since childhood.
- She got an epidural during pregnancy 15 years ago, developed low back pain at that time.
- It significantly worsened after a spinal anesthetic 10 years ago prior to tubal ligation.
- Multiple attempts for epidural placement. First 2 attempts she had paresthesia in the right followed by left lower extremity. She then developed paresthesia in both legs. Since that time her low back pain and leg pain have significantly worsened.
- She describes the pain as dull with intermittent sharp spikes, also reports constipation and urinary incontinence. She had gait instability with falls over the last 3 years. She reports subjective leg weakness and intermittent fecal incontinence over the last 12 months. No relief with physical therapy.
- Lumbar MRI showed Elongated filum terminale and a low lying cord “suggestive of tethered cord syndrome”, and she was referred for surgery

Images



MRI Report:

- No Significant Canal or neural foraminal narrowing at any lumbar level
- There is fatty signal along the expected course of the filum terminale measuring 2 mm in transverse dimension extending from the level of L3-L4 inferiorly possibly to the level of S2, likely representing a filar lipoma

Discussion

- TCS is a diverse clinical entity, which is caused by excessive tension on the spinal cord. In this condition, lumbar puncture is dangerous, and can lead to injuries of lower lumbar spinal cord and Conus Medullaris.
- Adult TCS is very difficult to detect before anesthesia because symptoms and signs are inconspicuous. Not much about adult TCS after spinal anesthesia had been published. Most original articles were case reports. Since the condition is rare, it is possible that patients would be misdiagnosed and treated incorrectly.
- When acute symptoms of paresthesia/ lower extremities happens after spinal anesthetic it is important to get a timely MRI
- Treatment of these conditions branches into two main approaches, either a surgical correction or conservative monitoring of symptoms. Currently, there is no consensus on the indication for surgery, but it is common practice to consider it for new-onset or progression of neurological symptoms.
- Severely affected patients with chronic, static symptoms don't appear to benefit from surgical intervention.

MRI Findings in TCS

- **Low-lying conus Medullaris:** The conus Medullaris, or base of the spinal cord, is positioned below the second lumbar level
- **Thickened filum terminale:** The filum terminale may be thickened or contain fat
- **Lesions:** MRIs can identify lesions associated with TCS, such as lipomas, tumors, myelomeningocele, or split cord malformation
- **Lack of motion:** A lack of motion between supine and prone MRI scans may indicate TCS

Conclusion

- Spinal anesthesia for adult Tethered Cord syndrome should be avoided.
- MRI should be done in a timely manner when acute onset of symptoms in lower extremities happens after Spinal Anesthesia

References

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- Scher EA, Ayad S. Complicated Neuraxial Anesthesia in a Patient With Tethered Spinal Cord. Cureus. 2021 Oct;13(10).
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