



Neuraxial Anesthesia Affected by a Sacral Tarlov Cyst

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Background

- Perineural cysts (Tarlov Cysts) are a rare, yet unique neuraxial pathology involving Cerebral Spinal Fluid-filled sacs affecting approximately 5% of the adult population
- They are typically asymptomatic and are diagnosed incidentally on Magnetic Resonance Imaging (MRI).
- Perineural cysts have the potential to affect neuraxial medication spread, thus increasing the risk of failed neuraxial anesthesia and required conversion to general endotracheal anesthesia.

Clinical Presentation

- A 37-year-old G3P1011 at 23w2d presented for dilation and evacuation secondary to fetal abnormalities.
- Past Medical History:
 - intermittent headaches
 - previous chronic low back pain with previous RLE radiculopathy
- MRI Lumbar spine was significant for a small perineural cyst within the sacral spinal canal at the S2 level measuring 1.2 x 0.8 cm.
- The patient reported alleviation of her lumbar back pain after physical therapy and denied significant weakness or radiculopathy at time of presentation



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Clinical Course

- Anesthetic plan: neuraxial anesthesia (spinal) with hyperbaric bupivacaine 0.75%.
- 25-gauge spinal needle was utilized with an introducer. Gravity flow of clear cerebral spinal fluid was observed prior to administration of the intrathecal dose.
- The patient's sensory and motor block was assessed with the perception of pain to pinprick and strength of hip flexion and extension
- Physical Exam:
Left: T7-S3 Bromage 2
Right: T10-L1 Bromage 0

Clinical Course

- Subsequent neurological assessment demonstrated an unchanged sensory and motor exam, with no improvement in sensory or motor blockade in the upper thoracic dermatomes or her right lower extremity.
- The decision was made to convert to general endotracheal anesthesia (GETA).
- The procedure proceeded uneventfully without complication, and the patient recovered successfully in the post anesthesia care unit.
- Patient had return of baseline neurological status after resolution of the neuraxial block



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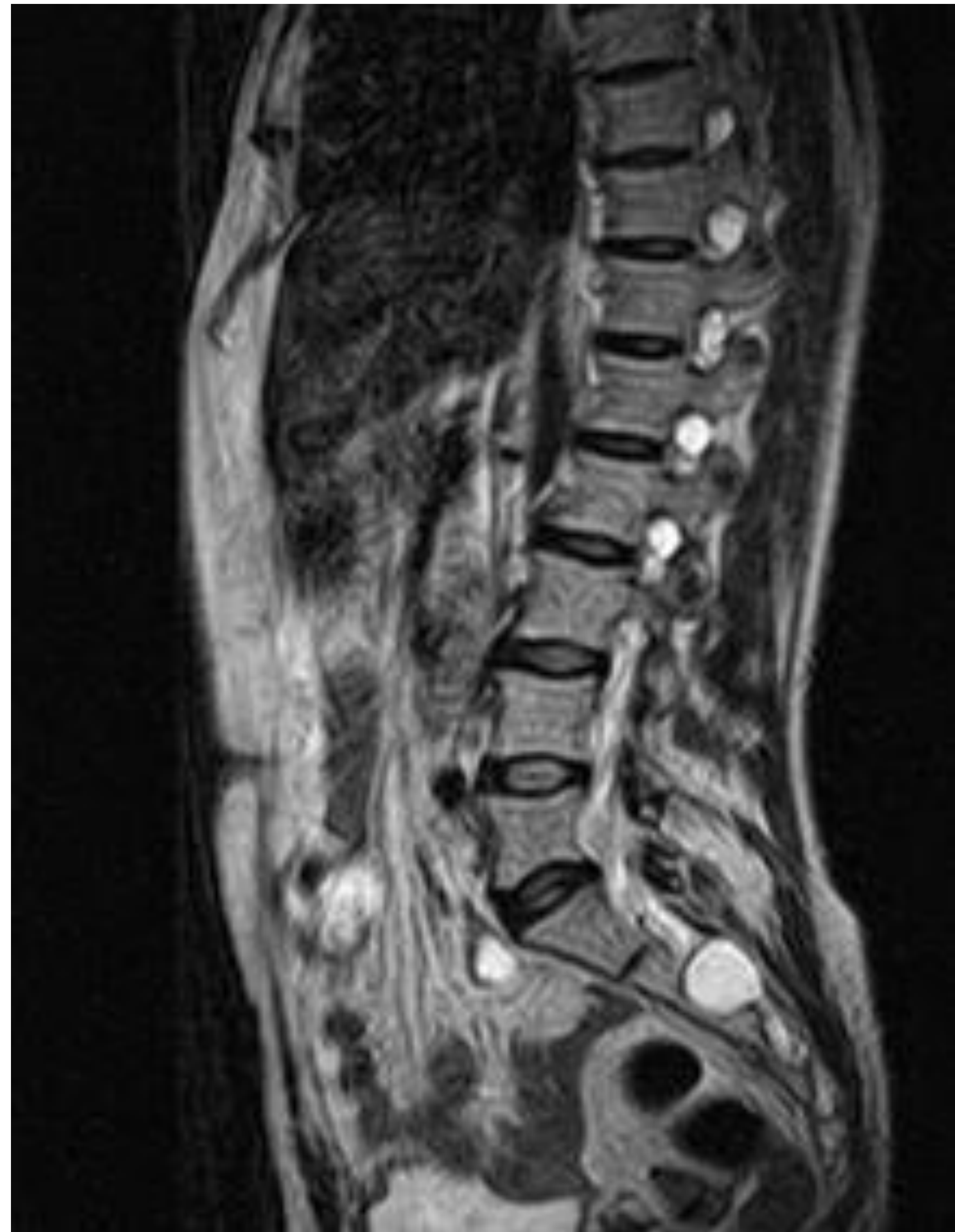


Figure 1: Magnetic Resonance Imaging of sacral Tarlov cyst
(https://en.wikipedia.org/wiki/Tarlov_cyst)

Discussion

- Located between the endoneurium and perineurium, perineural cysts of the spinal nerve roots are commonly found in the sacral region of the spinal column
- Despite appropriate neuraxial technique and post-procedural positioning after spinal, abnormal intrathecal spread of local anesthetics and inadequate surgical block can occur-requiring conversion to GETA.
- This case suggests there is a higher risk of neuraxial failure in patients with asymptomatic and symptomatic perineural cysts, and provides clinical considerations for their identification and management.

References

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