

Rapidly Progressing Myelopathy Associated With Intradural Arachnoid Cyst Presenting With Thoracic Axial Pain: Case Report

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Introduction

Spinal intradural arachnoid cysts (SIACs) are cerebrospinal fluid (CSF)-filled sacs originating from the arachnoid membranes, and they are most commonly located in the thoracic region. These cysts may be idiopathic or acquired, with the latter often developing secondary to trauma or other inflammatory events causing meningeal adhesions. Only about 20–30% of thoracic intradural arachnoid cysts are symptomatic. We present a case of a thoracic intradural cyst presenting with chest pain and progressive myelopathic symptoms.

Case presentation

A 37-year-old female with Ehlers-Danlos syndrome presented in July 2024 with progressive mid-back pain. She reported sharp, radiating thoracic pain with paraspinal tenderness, improved with rest, without motor or sensory deficits. Thoracic x-rays showed degenerative changes suggestive of facet-arthropathy, which, in addition to myofascial pain, was supported by physical exam. She was referred to physical therapy and started on Lyrica, which yielded a self-reported 90% improvement by November. Her symptoms recurred after Lyrica was held during a 5-day hospitalization in December. By March, symptoms progressed to include chest wall paresthesias, imbalance, and urinary incontinence. Thoracic MRI revealed an arachnoid cyst anteriorly displacing the spinal cord at T5-T8. This prompted neurosurgical evaluation, but no intervention was offered at this time.

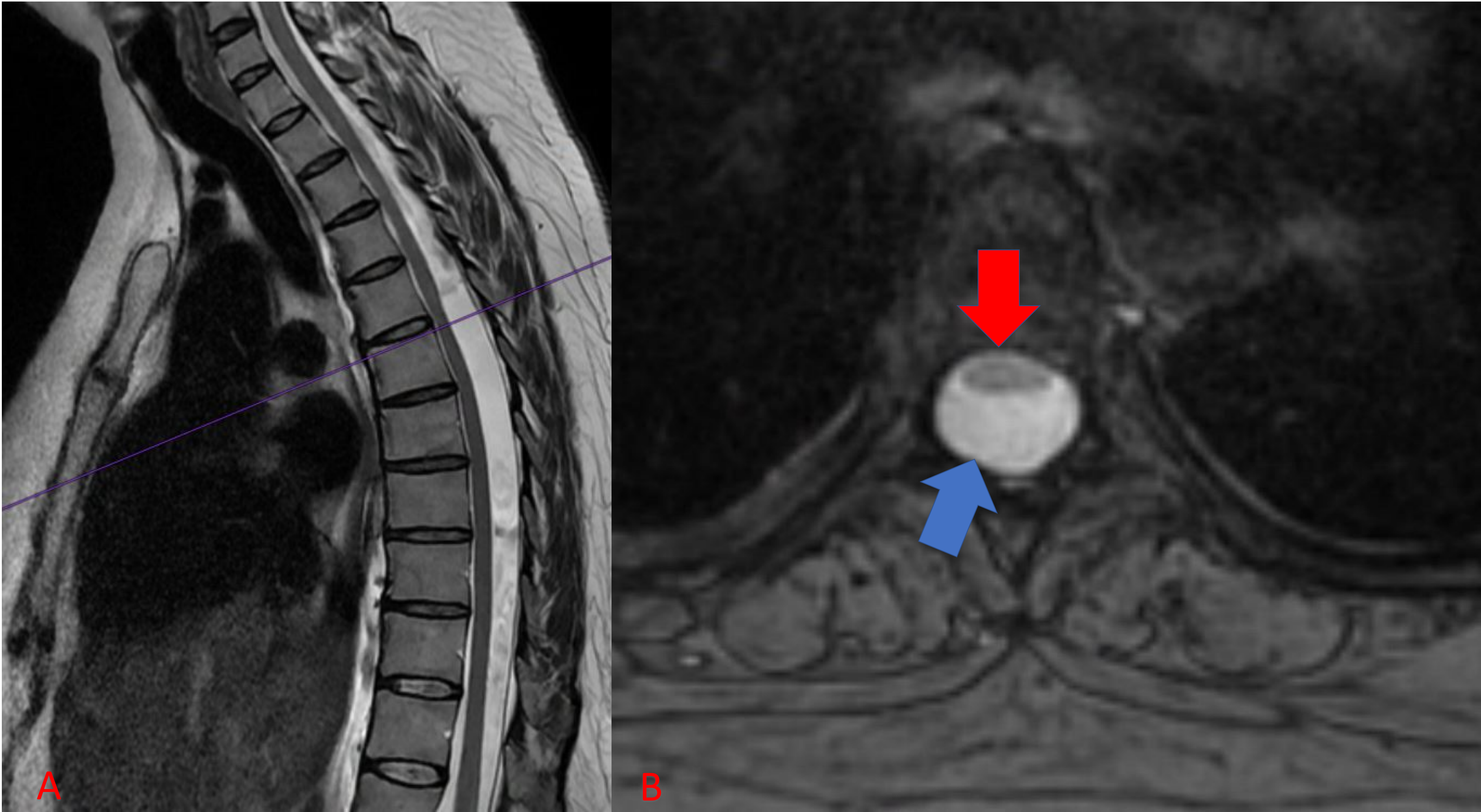


Figure 1. Sagittal T2w image demonstrating the cyst spanning from T5 to T8 (A) , with the corresponding axial cut to demonstrate the relationship between the cyst (blue arrow) and the thoracic cord (red arrow). At this level the cord is being displaced anteriorly by the cyst.

Case development

By June 2025, she experienced debilitating gait instability and limb weakness, requiring a cane for ambulation. She presented to the ED with worsening symptoms and a repeat thoracic MRI demonstrated cord flattening from the cyst and multiple dorsal intrathecal AVMs, later identified as flow void artifacts. CT-myelogram showed communication of the cyst with the subarachnoid space. She was deemed a surgical candidate for T4–T8 laminoplasty with cyst fenestration due to severe cord compression and myelopathy. She underwent the planned T4–T8 laminoplasty with cyst fenestration shortly after her admission, and was discharged on POD #3 without surgical complications. By the day of discharge, she had already shown great improvement in her gait (now able to ambulate without a walker) and neurogenic bladder.

Discussion

This case is relevant for several reasons. Thoracic pain is not a usual presentation for SIACs, as >80% of cases are incidentally discovered². This patient had only intermittent paresthesia of the chest wall, which could have been an early sign of radiculopathy. Lastly, the relatively rapid progression of symptoms to dorsalgia associated with myelopathy is atypical³. While there is no documented evidence, the connective tissue disorder (Ehlers-Danlos) may be a predisposing factor for this course¹.

References

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