

Leg Weakness, Abdominal Pain, and Discordant Neurologic Findings: A Diagnostic Challenge to Extramedullary Meningioma

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Background

Physical exam findings are often utilized to navigate the differential diagnoses of a pain patient. Classic upper motor neuron signs, such as Babinski, hyperreflexia, clonus, and weakness can be highly specific but poorly sensitive [1].

Spinal meningioma is a rare tumor that usually presents with chronic, progressive radicular or myelopathic symptoms along with back pain [2]. In this case, we present how the diagnosis of a thoracic spinal meningioma was reached in a young woman with complex symptoms and physical exam findings significant for a positive Romberg's sign.

Methods

- A comprehensive EMR review was performed.
- Patient symptomatology on presentation, physical exam findings, subsequent encounters, imaging results, therapies performed, referrals and eventual diagnosis were reviewed.
- Patient consent was obtained.

References
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3. Engelhard HH, Villano JL, Porter KR, Stewart AK, Barua M, Barker FG, Newton HB. Clinical presentation, histology, and treatment in 430 patients with primary tumors of the spinal cord, spinal meninges, or cauda equina. J Neurosurg Spine. 2010 Jul;13(1):67-77. doi: 10.3171/2010.3.SPINE09430. PMID: 20594020.

Patient Presentation

48-y/o non-English speaking Female with PMHx of anxiety presented with intermittent LUQ abdominal pain and left leg weakness.
Notable pain history: R-sided low back pain (2021, resolved with R L5/S1 TFESI) and L-sided sciatica (2025, resolved with L L5/S1 TFESI). In Fall of 2025, patient's primary complaint was left leg weakness and left abdominal pain without radicular symptoms.

Initial Physical Exam: benign abdominal exam. Antalgic gait, Decreased strength in left hip flexion/knee extension/toe dorsiflexion. Symmetric reflexes intact, *no UMN signs*.
MRI lumbar spine showed L3-4 left and L5-S1 bilateral disc bulges. Patient was referred to Neurology for evaluation of weakness; EMG confirmed L5 radiculopathy, brain MRI was negative for any unusual findings. Patient underwent repeat L4-L5 TFESI in early 2026.

On follow-up, patient had developed severe bilateral leg numbness with left-sided burning pain and was started on neuropathic agents.

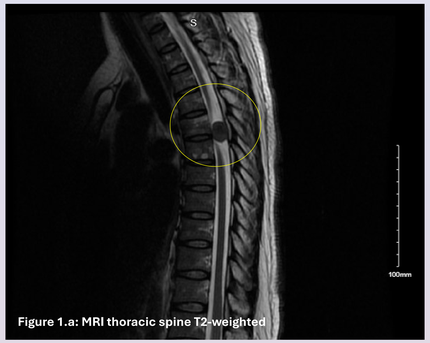


Figure 1.a: MRI thoracic spine T2-weighted

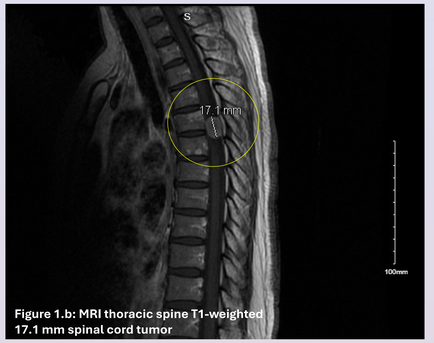


Figure 1.b: MRI thoracic spine T1-weighted 17.1 mm spinal cord tumor

Evolving presentation

One month later, patient returned c/o worsening abdominal pain and continued leg weakness, with diminished sensation on left in a non-dermatomal pattern. Patient was noted with a **positive Romberg sign**. Decision was made to undergo further workup with Cervical/Thoracic MRI, which revealed a large extradural mass at T5-T6 compressing the spinal cord (**Figure 1**). Urgent neurosurgical referral was made, and patient underwent laminectomy and tumor resection.

Discussion

As highlighted in our case, slow-growing tumors such as spinal meningiomas may lack significant symptomatology or physical exam findings, including upper motor neuron signs, despite substantial spinal cord compression [3]. Pain physicians in training should remember to perform thorough physical exams, recognizing both positive and negative findings, while understanding the sensitivity and specificity of the exams and that absence of findings may not exclude a diagnosis. Early detection and timely imaging remain key to identifying etiologies of unexplained weakness or pain in young patients.