49-year-old female who reports a 2-year history of upper thoracic midline pain that was significantly worsened since a few months ago. Patient experienced loss of sensation bilaterally below her nipples extending into her legs.

> Erica Shen, MD PhD Ketan Bulsara, MD MBA Michael T. Baldwin, MD Leo Wolansky, MD

HEALTH RADIOLOGY





T2 Sagittal

HEALTH RADIOLOGY





STIR Sagittal





Gd-T1 Sagittal













T2 Axial





Gd-T1 Axial





Thoracic Spinal Meningioma





MRI T2, sagittal: Mild homogenous hyperintense, broad-based, well-defined, dural attachment at T3-T4 level compressing adjacent spinal cord.





MRI STIR, sagittal:

Hyperintense, broad-based, dural attachment abutting the spinal cord at T3-T4 level, with some hyperintense signal changes in the cord suggesting edematous changes within the spinal cord.





MRI gadolinium-T1, postcontrast, sagittal: Homogenous, broad based, post-contrast enhancing dural attachment at T3-T4 level resulting significant compression of adjacent spinal cord.





MRI T1, axial:

Homogenous, post-contrast enhancing, broadbased, well-defined, dural attachment at T3-T4 level causing significant compression of adjacent spinal cord.

RADIOLOGY



MRI T2, axial:

Broad-based lesion causes complete occlusion of the subarachnoid space, resulting in a lack of CSF signal.



Thoracic Spinal Meningioma

- Spinal meningioma is the second most common intradural extramedullary spinal neoplasm after schwannoma.
- Accounts for ~25% of spinal canal tumor.
- Four times more common in women than men.
- Typically occur between ages of 40 and 70.

Imaging Findings

- The most common location is the thoracic spine (80%), followed by the cervical spine (15%).
- Spinal meningioma rarely occurs in the lumbosacral spine (5%).
- More likely located lateral to the spinal cord (60-70%).
- Most meningiomas are solitary lesions (98%).
- "Ginkgo leaf sign."
- Well-defined borders, broad-based dural attachment.
- Relatively homogenous enhancement.

HEALTH RADIOLOGY

Dubey, P., et al. Radiology, a core review. Philadelphia, Wolters Kluwer. 2018.

Spinal Tumor Categories

<u>Intradural</u>

Extramedullary

Spinal meningioma Spinal schwannoma Drop metastases Leptomeningeal lipoma

Intramedullary

Transverse myelitis Ependymoma Astrocytoma Hemangioblastoma

Extradural

Spinal schwannoma Spinal neurofibroma Extradural cyst (Developmental vs. Acquired)



Harbaugh, R.E., Shaffrey, C., Couldwell, W.T., Berger, M.S. Neurosurgery Knowledge Update, a comprehensive review. New York, Thieme, 2015.

References

- Dubey, P., et al. Radiology, a core review. Philadelphia: Wolters Kluwer. 2018.
- Harbaugh, R.E., Shaffrey, C., Couldwell, W.T., Berger, M.S. Neurosurgery Knowledge Update, a comprehensive review. New York, Thieme, 2015.
- https://radiopaedia.org
- Shen, E., Bulsara, K., Baldwin, M.T., Wolansky, L. Thoracic Spinal Meningioma. Radiology Online, 2021.

