46 year old male with right lumbar radiculopathy, now with new right thigh sensory deficit.

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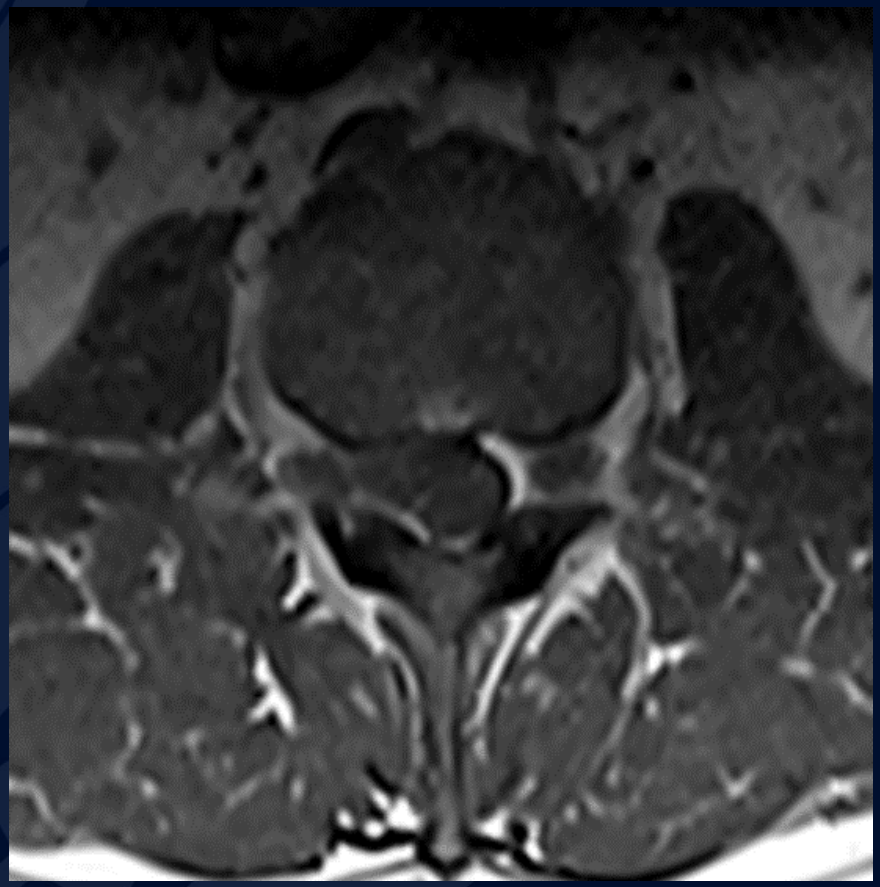

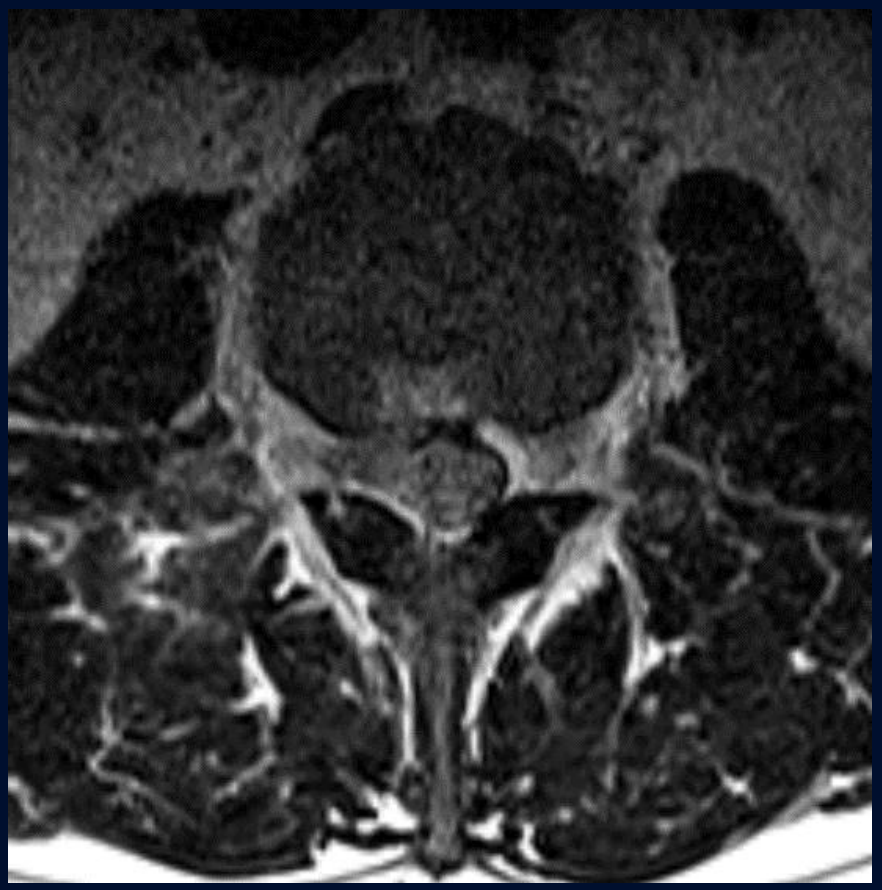

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Sequestered disc

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T2 weighted

STIR

Sagittal T2 weighted and STIR images demonstrate a large sequestered disc at the level of L2 measuring 19 mm cranio-caudal.

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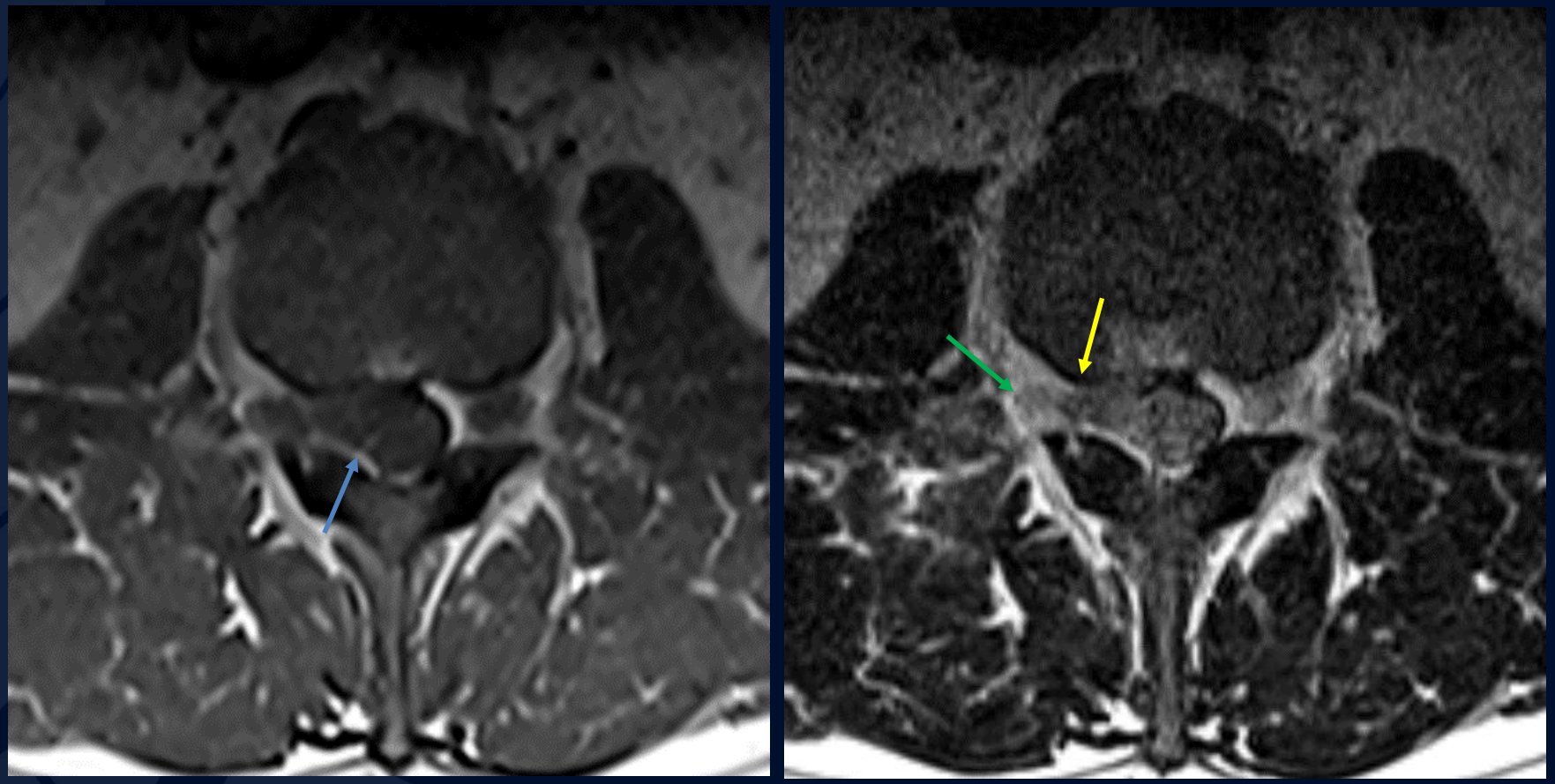

Axial T1 weighted image demonstrates right-sided dural sac deformity (blue arrow). The sequestered disc fragment abuts extends into the right neural foramen (yellow arrow) and compresses the exiting right L2 nerve root sleeve (green arrow).

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Disc sequestration

Definition:

Sequestered disc corresponds to extruded disc material that has no continuity with the parent disc and is displaced away from the site of extrusion.

Etiology of disc herniations:

- Environmental factors (Heavy lifting, twisting, acute trauma etc)
- Age
- Poor posture
- Repetitive trauma
- Interruption of nutritional supply to disc
- Genetics

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Disc sequestration

Epidemiology:

- 5-10% of all disc herniation

Clinical presentation:

- Severe radicular pain
  - More symptomatic compared to other disc herniations
  - Mass effect on exiting nerve root
  - Chemical irritation of nerve root
  - Lumbar: 25% sciatic and 75% femoral distribution

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Disc sequestration

MRI findings:

- **T1WI:** Isointense to parent disc
- **T2WI:** Iso-, hypo-, or hyper-intense to parent disc
- **T1WI with contrast:**
  - May enhance peripherally
  - Variable extent of impingement on exiting nerve root
    - Contracted, displaced, flattened
    - Nerve root may show post-gadolinium enhancement
    - Extra-foraminal (far-lateral) component best seen on axials
    - May involve adjacent nerve root
  - Disc height loss
  - Degenerative endplate changes

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Disc sequestration

Differential Diagnosis:

- Schwannoma:
  - Enlarged neural foramen due to chronic remodeling
  - Diffuse post-contrast enhancement
  - “Dumbbell” appearance on axial imaging

- Spinal nerve root diverticulum, meningeal cyst, Tarlov cyst
  - Cerebral spinal fluid intensity on all sequences
  - No enhancement

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References:

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