Alternative Cervicothoracic Access and Strategic Patient Positioning for Cervical Interlaminar ESI in Severe Cervical Spondylosis

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BACKGROUND

Cervical interlaminar epidural steroid injections (CIESIs) are an established treatment for cervical radiculopathy, typically performed prone at C7–T1, where the larger interlaminar window facilitates epidural access.

Guidelines emphasize lower cervical access, contralateral oblique (CLO) fluoroscopy, contrast confirmation, and avoiding hazardous trajectories.[1,2]

Severe spondylosis with extensive osteophytes may narrow the intended window. Reports combining alternative access with post-injection positioning remain limited.[3–5]

METHODS

Patient informed consent was obtained for submission and presentation of this case report. All protected health information was de-identified; exempt from IRB review per institutional policy. Clinical records, procedural documentation, imaging findings, and follow-up communications were reviewed.

CASE PRESENTATION

- **66-year-old man** with chronic right-sided neck pain radiating into the right upper extremity despite home exercise, dry needling, and multiple medication trials
- **Exam:** positive right Spurling maneuver and cervical facet loading pain; no motor deficits or signs of myelopathy
- **MRI/CT:** advanced multilevel spondylosis with disc-osteophyte complexes, moderate canal stenosis, moderate-to-severe foraminal stenosis, and extensive posterior osteophytic obstruction of the intended right C7–T1 window (Fig. 1)
- **Outcome:** no immediate complication; mild-to-moderate symptomatic improvement at follow-up

Osteophytes blocked C7–T1. A contralateral T1–T2 approach plus post-injection positioning still allowed a safe cervical epidural.

IMAGING

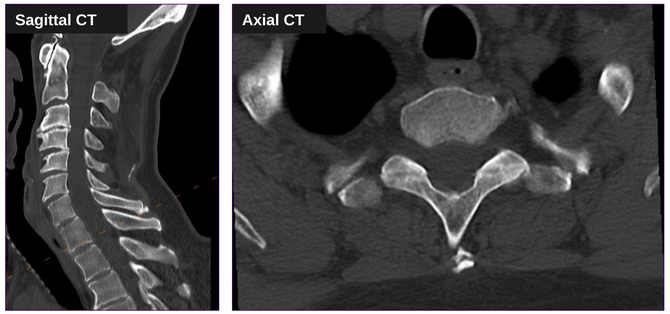


Figure 1. Pre-procedural CT: advanced multilevel spondylosis with extensive posterior osteophytic degeneration severely narrowing the intended C7–T1 interlaminar window.

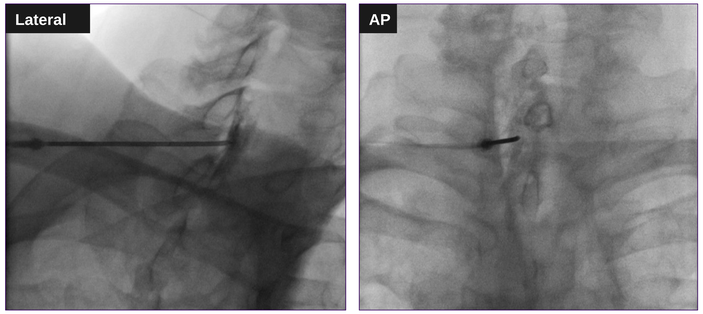


Figure 2. Lateral and AP fluoroscopy: epidural access through a left paramedian T1–T2 interlaminar approach with contrast-confirmed epidural spread.

PROCEDURAL MODIFICATION

1. **Planned**
   Right C7–T1 interlaminar ESI, prone. Fluoroscopy confirmed osteophytic obstruction; safe ipsilateral access was unfavorable.
2. **Re-route**
   Left paramedian T1–T2 interlaminar access under CLO guidance, avoiding repeated needle manipulation through the narrowed window.
3. **Confirm & inject**
   Contrast-confirmed epidural spread (Fig. 2), then dexamethasone and preservative-free saline.
4. **Position**
   Still prone: ~30° Trendelenburg and head rotated left, to encourage cephalad spread from T1–T2 toward the symptomatic right side.

DISCUSSION

Paramedian approaches may yield greater ipsilateral and ventral contrast spread than midline; distribution also depends on level, volume, and individual anatomy.[3–5]

To our knowledge, this combination of techniques has not been systematically evaluated, and the effect of Trendelenburg and cervical rotation on injectate spread remains incompletely characterized.

A useful adjunct when complex degenerative anatomy precludes conventional ipsilateral access.

REFERENCES

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Patient informed consent was obtained for submission and presentation of this case report. All images have been de-identified. No off-label drug use.