



A Safe and Efficient Interlaminar Epidural Steroid Injection Using Omnipaque -300 in the Loss of Resistance Syringe

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Introduction

- Interlaminar epidural steroid injections (ESIs) are commonly used to treat radicular pain caused by conditions like herniated discs and spinal stenosis.
- The loss of resistance (LOR) technique, which can use air, saline, or contrast in the syringe, is employed to identify entry into the epidural space, with each option having potential benefits and complications.
- This case describes using contrast in the LOR syringe for interlaminar ESI, believed to improve efficiency and reduce risks.

Case Description

Pertinent History: A 58-year-old male presented with two months of right-sided leg pain after lifting heavy bags, which progressed to radicular pain in the posterior right leg. Despite treatment with NSAIDs, Tylenol, physical therapy, gabapentin, and a short course of prednisone, the pain returned.

Exam: Diminished right S1/ankle reflex (2-), intact motor strength, and positive right straight leg raise at 45° were noted.

Work-up: MRI revealed a right L4-5 paracentral disc protrusion. X-rays showed minimal disc degeneration at L4-5 and right L5-S1 facet changes.

Conclusion: The patient underwent an interlaminar ESI with fluoroscopic guidance, using Omnipaque -300 in the loss of resistance syringe, resulting in significant pain relief.



Image 1: 18 gauge tuohy needle inserted onto the lamina just caudal to the L4-5 interspace at a 25° contralateral oblique view

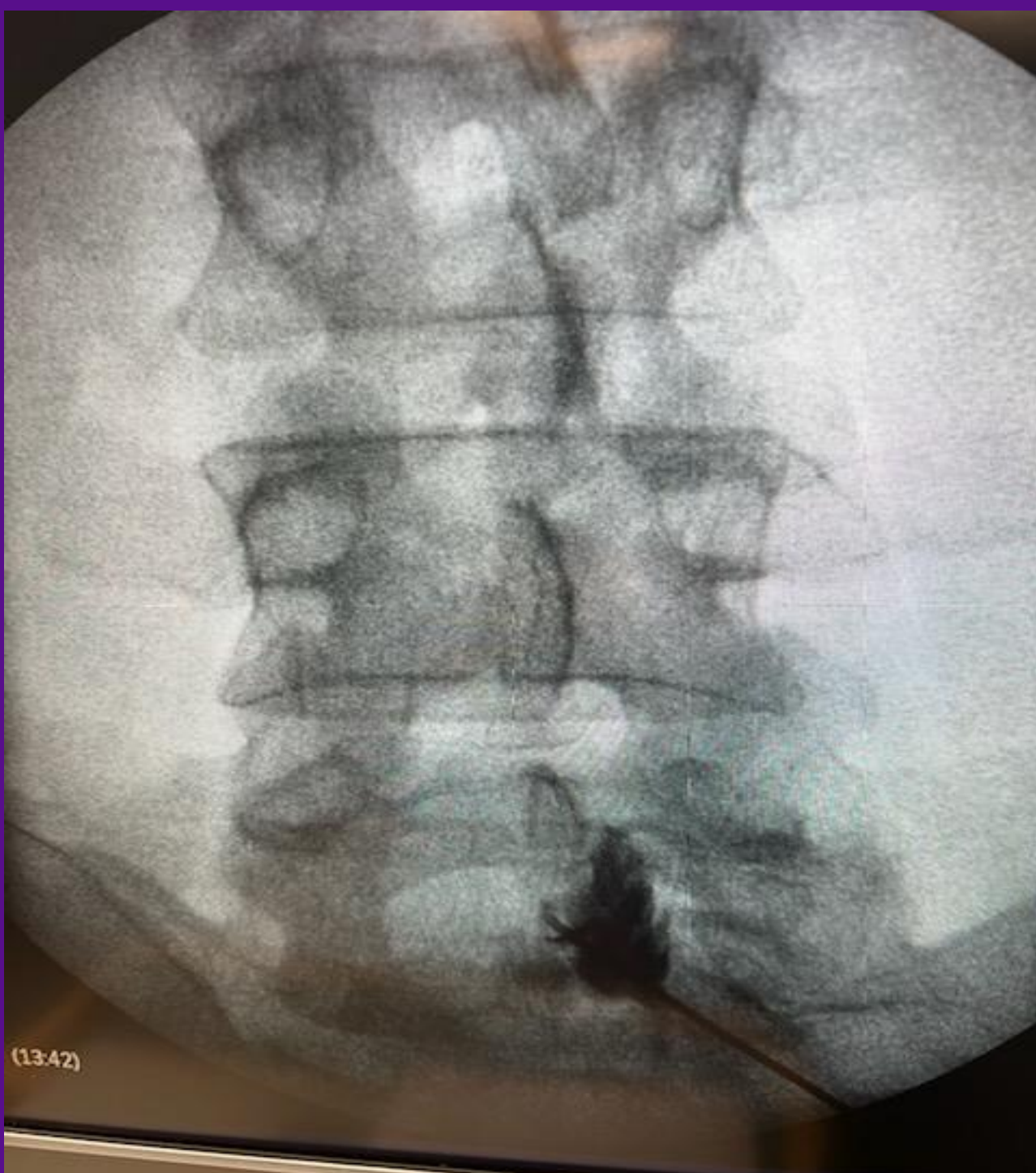


Image 2: Location of the needle validated with AP view. 2cc of Omnipaque-300 was injected and epidural spread was noted.

Discussion

- Fluoroscopic guidance enhances safety by verifying proper injectate spread.
- Using contrast-filled Tuohy needles shows lower false-positive rates (6.6%) compared to air (29.4%) for epidural space entry.
- Omnipaque-300, due to its higher viscosity, helps prevent dural punctures by pushing the dura away from the needle during injection.
- Contrast may reduce complications like venous air embolism and nerve root compression compared to air or saline.
- Contrast allows providers to access the epidural space and inject without syringe exchange, improving procedural safety and efficiency.

References

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