Transforaminal versus Interlaminar Epidural Steroid Injection: Which is superior?

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Introduction
The superiority of transforaminal epidural steroid injections (TFESI) vs. interlaminar epidural steroid injections (ILESI) for treating unilateral lumbosacral radicular pain (LSRP) is unproven.

Objective
To assess studies directly comparing TFESI to ILESI for unilateral LSRP for pain relief and functional improvement.

Methods
A systematic literature search was conducted using the Cochrane Central Register of Controlled Trials, PubMed, and Scopus databases for trials reported in English. Evidence was graded using the USPSTF classification.

Data
Five prospective and three retrospective studies were included assessing 506 patients. Statistical analysis was calculated utilizing the five prospective studies and consisted of 249 patients with an average of 3.2 months follow-up.

In the short-term (2 weeks), there was a 15% difference favoring TFESI vs. ILESI for pain relief. There was no efficacy difference at 1 or 6 months. Combined pain improvements in all five prospective studies revealed < 20% difference between TFESI and ILESI (54.1% vs. 42.7%).

There was slightly better functional improvement in ILESI groups (56.4%) vs. TFESI groups (49.4%) at two weeks. Combined data showed slight differences (TFESI 40.1% and ILESI 44.8%).

Conclusions
In the treatment of pain, TFESI demonstrated non-clinically significant superiority to ILESI only at the two-week follow up.

Limitations
The limitations of this systematic review include the relative paucity of comparative studies.

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