

A systematic review and network meta-analysis comparing different epidural steroid injection approaches.

Abstract:

Background:

Low back pain (LBP) and lumbosacral radiculopathy are frequent disorders that cause nerve root injury, resulting in a variety of symptoms ranging from loss of sensation to loss of motor function depending on the degree of nerve compression.

Objectives:

The goal of this study was to investigate the effectiveness of various epidural injection procedures in adult LBP patients

Study Design:

Systematic review and network meta- analysis.

Setting:

Egypt.

Methods:

PubMed, Scopus, Web of Science, Cochrane Database, and Embase were used to conduct an electronic literature search. We included RCTs, cohorts, case controls, patients 30 years old with a clinical presentation of low back pain, and comprehensive data on the effects of the intervention on patients with lumbosacral radicular pain who got epidural steroid injections via various techniques. Only papers written in English were eligible.

Results:

Our analysis showed that parasagittal intralaminar (PIL) was the most effective approach in decreasing VAS (0– 10) in the short term (< 6 months) (MD = –1.16

[95% CI -2.04, -0.28]). The next significant approach was transforaminal (TF) (MD = -0.37 [95% CI -1.14, -0.32]) in the long term; TF was the most effective approach (MD = -0.56 [95% CI -1, -0.13]). According to VAS (0–100) in the short term (< 6 months), our analysis showed an insignificant difference among the injection approaches and in the long term; TF was the most effective approach (MD = -24.20 [95% CI -43.80, -4.60]) and the next significant approach was PIL (MD = -23.89 [95% CI -45.78, -1.99]).

Limitations:

The main limitations are the heterogeneity encountered in some of our analyses in addition to studies assessed as high risk of bias in some domains.

Conclusions:

TF was the most effective steroid injection approach. In decreasing VAS for short-term PIL and TF were the most significant approaches, but TF was the most effective approach in decreasing VAS for the long term. Also, TF was the most effective approach in decreasing ODI for the long term.