Efficacy of epidural steroid injections for low-back pain and sciatica: a systematic review of randomized clinical trials

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Authors' objectives
To assess the efficacy of epidural steroid injections for lower-back pain and sciatica.

Searching
MEDLINE was searched from 1966 to 1993 using the keywords 'backache' and 'low-back pain'. The references in relevant publications were further examined.

Study selection

Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were included.

Specific interventions included in the review
Epidural steroid injections were compared with saline, midazolam and dextrose, bupivacaine, dry needling, procaine and lignocaine.

Participants included in the review
Patients with back pain and/or sciatica were included.

Outcomes assessed in the review
A range of outcomes including pain, sciatic nerve stretch tolerance and percentage of patients who underwent surgical treatment. Outcomes were judged to be positive if the authors concluded that the steroid injection was more effective than the reference treatment.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection. Studies had to include one treatment regimen involving one or more epidural steroid injections, the papers had to be written in English and the participants had to suffer from back pain and/or sciatica. Abstracts and unpublished studies were excluded.

Assessment of study quality
A list of methodological quality criteria was used to assess the validity of individual studies; this included 6 items relating to the study population, 4 relating to the interventions, 4 relating to the effect, and 2 relating to data presentation and analysis. Each criterion was weighted. Two independent reviewers assessed the papers for validity using the methodological checklist, and resolved any disagreements by consensus; a third reviewer made the decision if agreement could not be reached.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
A narrative review was undertaken, where the outcome of the studies was discussed in relation to their methodological
How were differences between studies investigated?
The studies were discussed in relation to their methodological scores.

Results of the review
Twelve RCTs involving 534 patients were included.

The trials showed inconsistent results for studies involving steroid injections: 6 studies reported positive results and 6 reported negative ones. The positive and negative studies were similar with regard to their methodological quality.

Authors' conclusions
The best studies showed inconsistent results of epidural steroid injections. The efficacy of epidural steroid injections has not yet been established. The benefits of epidural steroid injections, if any, appear to be short-term only. Future research efforts are warranted, but more attention should be paid to the methodologies employed.

CRD commentary
The review appears methodologically sound despite a somewhat limited search, both in terms of the search terms and database used.

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the reliability of the review and the conclusions drawn.