

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

# Intrathecal Dexamethasone for Chronic Pain and Spinal Stenosis: Clinical Effectiveness and Guidelines

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## Research Questions

1. What is the clinical effectiveness of dexamethasone administered intrathecally for the treatment of chronic pain and spinal stenosis?
2. What are the evidence-based guidelines regarding the use of dexamethasone administered intrathecally for the treatment of chronic pain and spinal stenosis?

## Key Findings

No clinical evidence or evidence-based guidelines were identified regarding the clinical effectiveness or use of dexamethasone administered intrathecally for the treatment of chronic pain and spinal stenosis.

## Methods

### Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, Embase, the Database of Abstracts of Reviews of Effectiveness (DARE), Health Technology Assessments (HTA), the Cochrane Database of Systematic Reviews, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy consisted of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were dexamethasone, intrathecal administration, and chronic pain or spinal stenosis. No filters were applied to limit the retrieval by study type. Conference abstracts, comments, newspaper articles, editorials, and letters were excluded. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and December 2, 2020. Internet links were provided, where available.

### Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. The Overall Summary of Findings was based on information available in the abstracts of selected publications. Open access full-text versions of evidence-based guidelines were reviewed when abstracts were not available, and relevant recommendations were summarized.

**Table 1: Selection Criteria**

<b>Population</b>	Adults with chronic pain or spinal stenosis
<b>Intervention</b>	Dexamethasone administered intrathecally
<b>Comparator</b>	Q1: Dexamethasone administered using alternative routes (e.g., systemic, epidural); alternative pharmacotherapy; non-pharmacological interventions; no treatment; placebo Q2: Not applicable
<b>Outcomes</b>	Q1: Clinical effectiveness (e.g., pain, quality of life, functionality, safety [e.g., adverse events, neurotoxicity, nerve root damage]) Q2: Recommendations regarding best practices (e.g., appropriate patient populations and clinical settings)

**Study Designs**

Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, evidence-based guidelines

**Results**

No health technology assessments, systematic reviews, randomized controlled trials, or non-randomized studies were identified regarding the clinical effectiveness of dexamethasone administered intrathecally for the treatment of chronic pain and spinal stenosis. Additionally, no evidence-based guidelines were identified regarding the use of dexamethasone administered intrathecally for the treatment of chronic pain and spinal stenosis.

References of potential interest that did not meet the inclusion criteria are provided in the appendix.

**Overall Summary of Findings**

No relevant literature or evidence-based guidelines were found regarding the clinical effectiveness or use of dexamethasone administered intrathecally for the treatment of chronic pain and spinal stenosis; therefore, no summary can be provided.

**References Summarized****Health Technology Assessments**

No literature identified.

**Systematic Reviews and Meta-analyses**

No literature identified.

**Randomized Controlled Trials**

No literature identified.

**Non-Randomized Studies**

No literature identified.

**Guidelines and Recommendations**

No literature identified.

## Appendix — Further Information

### Randomized Controlled Trials – Alternative Population

1. Sakic L, Tonkovic D, Sakic K. Dexamethasone - intrathecal minimiser of simple haemathologic stress biomarkers in hip fracture. *Acta Clin Croat.* 2019 Jun;58(Suppl 1):9-17.  
[PubMed: PM31741553](#)
2. Fayyaz MA, Khan AA, Ali RL. Comparison between effect of bupivacaine and bupivacaine with dexamethasone on duration of analgesia in spinal anaesthesia for elective caesarean section. *Pak J Med Health Sci.* 2015 Jul-Sep;9(3):979-82.
3. Mahmoud MF, Ali HM, Hashim MM, Fahmy AAK. Dexamethasone preventing dural puncture headache. *J Pain Manag.* 2015;7(4):273-77
4. Abdel-Aleem M, Osman A, Morsy K. Effect of coadministration of dexamethasone with intrathecal morphine on postoperative outcomes after cesarean delivery. *Int J Gynaecol Obstet.* 2012 Feb;116(2):158-61.  
[PubMed: PM22036059](#)