

THE EFFECT OF COMBINED INTRATHECAL DEXMEDETOMIDINE & LOCAL ANESTHETIC ON SPINAL ANESTHESIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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INTRODUCTION

- Dexmedetomidine, an $\alpha 2$ -receptor agonist, has been used to enhance the conductive block effects of local anesthetics (LA) in different regional anesthesia. Although this effect has been reported sporadically and systemically in the peripheral nerve blocks, a systemic review and meta-analysis of LA and dexmedetomidine mixture in the subarachnoid space is spared.
- We propose this study to examine the effecy and safety profile of different randomized control trials (RCTs) in which they used dexmedetomidine in addition to local anesthetics in their spinal anesthesia.

METHODS

- A systematic review and meta-analysis were performed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. (PROSPERO # CRD42023481927).
- PubMed, Embase, Scopus and Cochrane databases were searched from inception to December 2023 using the keywords "(dexmedetomidine OR precedex) AND (spinal OR intrathecal) AND (randomised OR randomized) by two different authors.
- Our **primary outcomes** of interest included the duration of the sensory block, the duration of the motor block, and the time to the first analgesic requirement (Fig. 1). Our **secondary outcomes** included Shivering, Hypotension, Bradycardia, Pruritus, Nausea, and vomiting.
- The risk of bias is assessed with version 2 of the Cochrane Risk of Bias assessment instrument (RoB 2) and publication bias by funnel plot inspection and conducting Egger's test.
- We included both Sensitivity Analysis and Subgroup analysis using different LA dosages.

