



## MATERNAL AND NEWBORN IMPACT OF EPIDURAL DEXAMETHASONE AS AN ADJUVANT FOR LABOR ANALGESIA: A META-ANALYSIS

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### Introduction:

Dexamethasone, an anti-inflammatory drug, when used epidurally, has an assumed analgesic effect but with less side effect than the other adjuvants. Although numerous studies have evaluated dexamethasone, there is paucity of studies assessing its intrapartum use.

This study will give additional evidence-based information towards the quest on the ideal labor analgesic adjunct to improve both the quality and duration of labor analgesia, limiting the dose related local anesthetic side effects without endangering both the parturient and the fetus.

The objective of this study is to determine the effectiveness of epidural dexamethasone when used as an adjuvant for labor analgesia.

### Methodology:

Cochrane handbook and PRISMA guidelines were followed. Cochrane RoB 2 was used to assess for quality. Quantitative data were pooled and analyzed using RevMan 5.4.1.

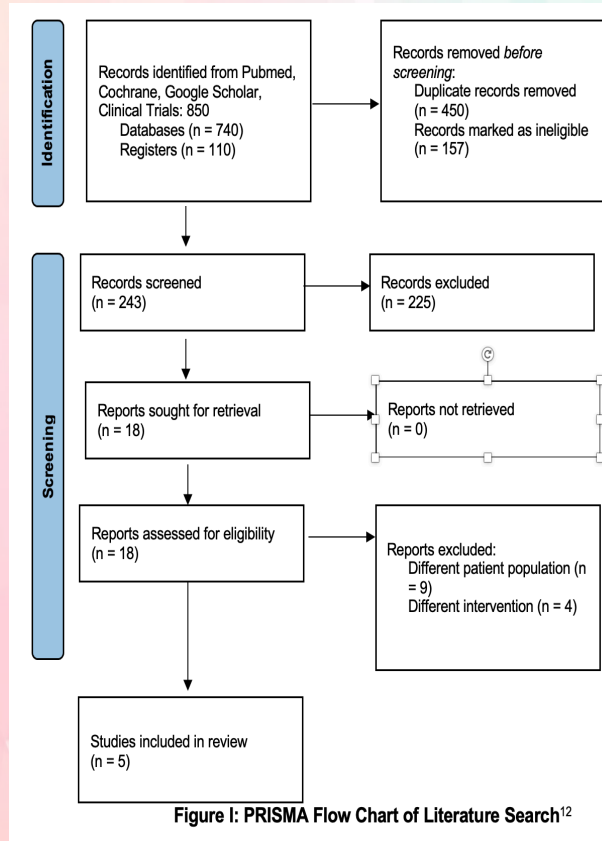


Figure 1: PRISMA Flow Chart of Literature Search<sup>12</sup>

### Keywords:

*Dexamethasone; Epidural; Labor analgesia; Meta-analysis*

### Results:

Five trials involving 309 women in labor were analyzed. Pooled mean difference and pooled risk ratio showed prolonged duration of epidural analgesia (MD=18.30min; 95%CI=13.55, 23.05; p-value<0.00001; I2=0%) and no significant maternal adverse events such as nausea and vomiting (RR=1.15; 95%CI=0.68, 1.94; p-value=0.61; I2=0%), shivering (RR=0.83; 95%CI=0.38, 1.81; p-value=0.65; I2=19%), hypotension (RR=1.22; 95%CI=0.53, 2.85; p-value=0.64; I2=0%) and fever (RR=1.15; 95%CI=0.68, 1.94; p-value=0.61; I2=14%) on those who received epidural dexamethasone. Pooled risk ratio and mean difference also showed that epidural dexamethasone had no significant effect on the neonatal APGAR (1 minute: RR=1.01; 95%CI=0.97, 1.04; p-value=0.78; I2=0%) and neonatal umbilical pH (MD=-0.00; 95%CI=-0.04, 0.04; p-value=0.94; I2=68%).

### Conclusion:

Epidural dexamethasone has a potential role as an adjuvant during labor analgesia on providing LA dose sparing effect through prolongation of the duration of epidural analgesia with limited maternal and neonatal adverse events but this should be interpreted with caution before adopting this on routine clinical practice since there were only 5 studies included and the number of included trials on each