

The DEX Best Thing: A Case Of Dexmedetomidine As An Epidural Adjunct In A Patient With Anaphylactic Allergy To Fentanyl

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Background

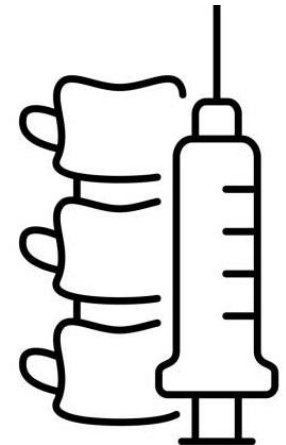
- Goal of labor analgesia is to optimize patient satisfaction, minimize adverse outcomes, and ensure safety
- Traditionally epidural infusions consist of local anesthetic and opioid adjuncts
- Known opioid anaphylactic allergy significantly limits what can be offered as adjunct to local anesthetics
- Dexmedetomidine (DEX), a selective α_2 -adrenoceptor agonist, offers sedative, analgesic, and anxiolytic properties without the respiratory depression ^[1]

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Case Overview

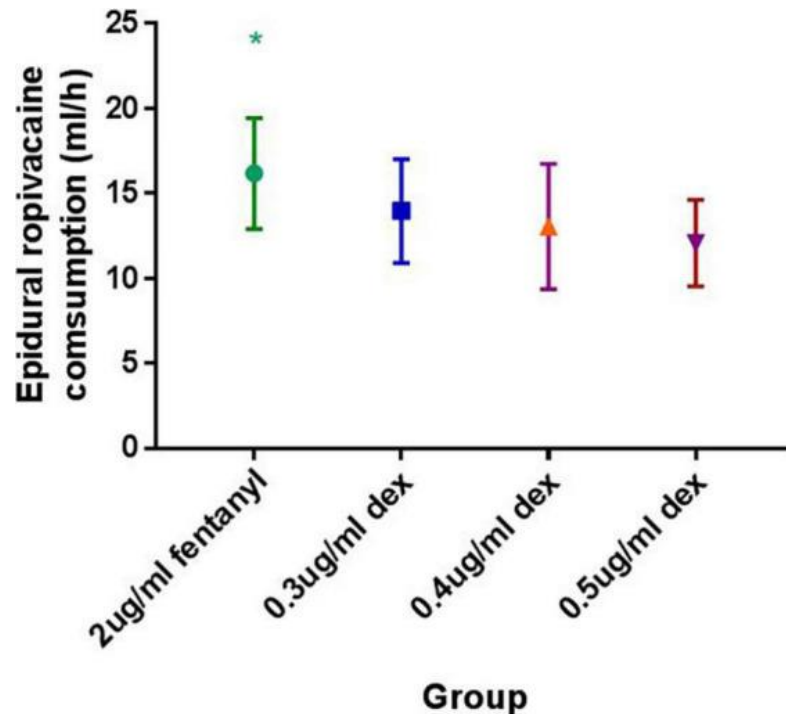
- A 36-year-old female, G5P2012 at 34+6 weeks, w/ PMH of HTN, depression/anxiety, gDM, chronic LBP anaphylactic allergy to fentanyl, who presented for labor triage after a non-reassuring non-stress test
- Has had two prior uneventful epidurals with 2% ropivacaine
- On arrival to triage was in breech presentation and elected for Cesarean section over ECV to attempt vaginal delivery.
- DPE was placed in labor room while awaiting NPO status and infusion of 0.1% bupivacaine with 0.02mcg/kg/hr DEX was run for 3 hours prior to surgery
- Epidural was loaded with 2% lidocaine with epinephrine for surgical block with 25mcg DEX and IV adjuncts during intra-operatively



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Learning Points



- Dexmedetomidine as an adjunct is commonly used internationally but less studied in the U.S.
- A meta-analysis of 9 randomized controlled trials (RCTs) found that DEX combined with LA resulted in similar patient satisfaction, fewer opioid-related side effects and comparable safety outcomes to opioid-based epidurals [2]
- RCT with 165 patients suggested that lower doses of DEX were superior to standard-dose fentanyl in reducing ropivacaine use and minimizing opioid-related side effects [3]

2. Li N, Hu L, Li C, Pan X, Tang Y. Effect of Epidural Dexmedetomidine as an Adjuvant to Local Anesthetics for Labor Analgesia: A Meta-Analysis of Randomized Controlled Trials. Evid Based Complement Alternat Med. 2021 Oct 27;2021

3. Pang RY, Shen YH, Jin XQ, Xu HF, Wang Y, Zhu BX, Lin SF, Xiao F. Comparison of epidural dexmedetomidine to fentanyl in reducing ropivacaine dose in Programmed Intermittent Epidural Bolus plus Patient Controlled Epidural Analgesia during labor: A randomized, double-blind, controlled study. Front Med (Lausanne). 2022 Oct 17

Image: <https://mms.mckesson.com/product/1104333/Auromedics-Pharmaceuticals-55150020902>