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Myoclonus after Ephedrine Administration

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A 37-year-old G5P2 patient at 39 weeks gestation presented to labor and delivery in active labor. Patient reported no allergies, no past medical history and she was not taking any medications. Blood pressure (BP) on presentation was 160/80. Patient requested labor epidural analgesia, and an epidural was placed at the L3-4 interspace on the first attempt. Test dose with lidocaine 45 mg and epinephrine 15ug were negative for both subarachnoid and intravenous placement. Epidural was bolused with 10cc of bupivacaine .125% with incremental dosing and then connected to a PCEA fentanyl (2 mcg/mL) + bupivacaine (.0625%) at 7 cc/hr. Approximately 30 minutes after a 10cc loading dose with bupivacaine 0.125% was given, the patient’s BP decreased from baseline to 105/51 and the patient complained of nausea. Ephedrine 5 mg was administered twice intravenously. Her BP increased to 123/87 and her nausea resolved.

Within 3-5 minutes of ephedrine administration, the patient began having bilateral upper extremity involuntary myoclonus tremor-like movements. She was neurologically intact, awake and alert, was able to follow commands. She was found to have a T4 sensory level, but she could still feel pressure with contractions in her sacral area. The epidural infusion was held. The myoclonus ceased about one hour after ephedrine was administered and did not recur. The epidural infusion was restarted when the sensory level regressed to T10, and there was no further ephedrine administration. Ephedrine has been associated with causing mild tremors. Myoclonic movements after ephedrine administration have not been reported previously.