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#### Introduction:

Integration of regional anesthesia for pediatric surgery has many advantages, with the most important being improvement in pain score and patient satisfaction. Infraclavicular nerve block is an excellent choice for surgeries of the upper arm and elbow. These blocks are generally safe with very few adverse effects when performed with ultrasound and an experienced anesthesiologist.

#### Case:

We describe a case of a 20 kg 6 year-old female with no prior medical history, presented for left elbow debridement and contracture release. She previously had a supracondylar fracture of the left elbow.

Our anesthetic plan included placing an infraclavicular catheter for postoperative pain. A left infraclavicular catheter was inserted under direct ultrasound visualization without complication. After negative aspiration of the catheter, 15 ml of 0.25% bupivacaine was administered intraoperatively.

Bupivacaine 0.1% infusion at 6 mL/hr was started in the PACU and continued upon transfer to a pediatric inpatient unit. Pain was well managed for 32 hours. On postoperative day 2, patient complained of increased pain with physical therapy. Five ml of 1.5% lidocaine was bloused through the catheter in order to increase the density of the block. The 0.1% bupivacaine infusion was resumed at 6 mL/hr. Thirty minutes after the lidocaine bolus the patient had a witness tonic-clonic seizure.

The bupivacaine infusion was immediately discontinued and the patient closely monitored. After an 8 hour seizure free interval, the infusion was re-started; the remainder of her hospital course was uneventful.

#### Discussion:

The risk of local anesthetic toxicity is low. The incidence of local anesthetic causing seizure following ultrasound-guided nerve blocks is 0.08. However, there is no data regarding the incidence of seizure with infraclavicular nerve catheters. For adults, no more than 225-300 mg of lidocaine without epinephrine is recommended for brachial plexus blocks. In pediatric patients, less than 4.4 mg /kg of lidocaine is recommended. Our patient received 3.75 mg/kg of lidocaine, less than the maximum dose. However, this was in addition to an infusion of bupivacaine 0.1% at 6 mL/hr. Seizures have been reported in patients undergoing Bier blocks performed with doses of lidocaine 1.4 mg/kg. Based on this case, it may be prudent to limit the dose of local anesthetic administered via an infraclavicular catheter in children.

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