

A Classic Presentation of Local Anesthetic Systemic Toxicity

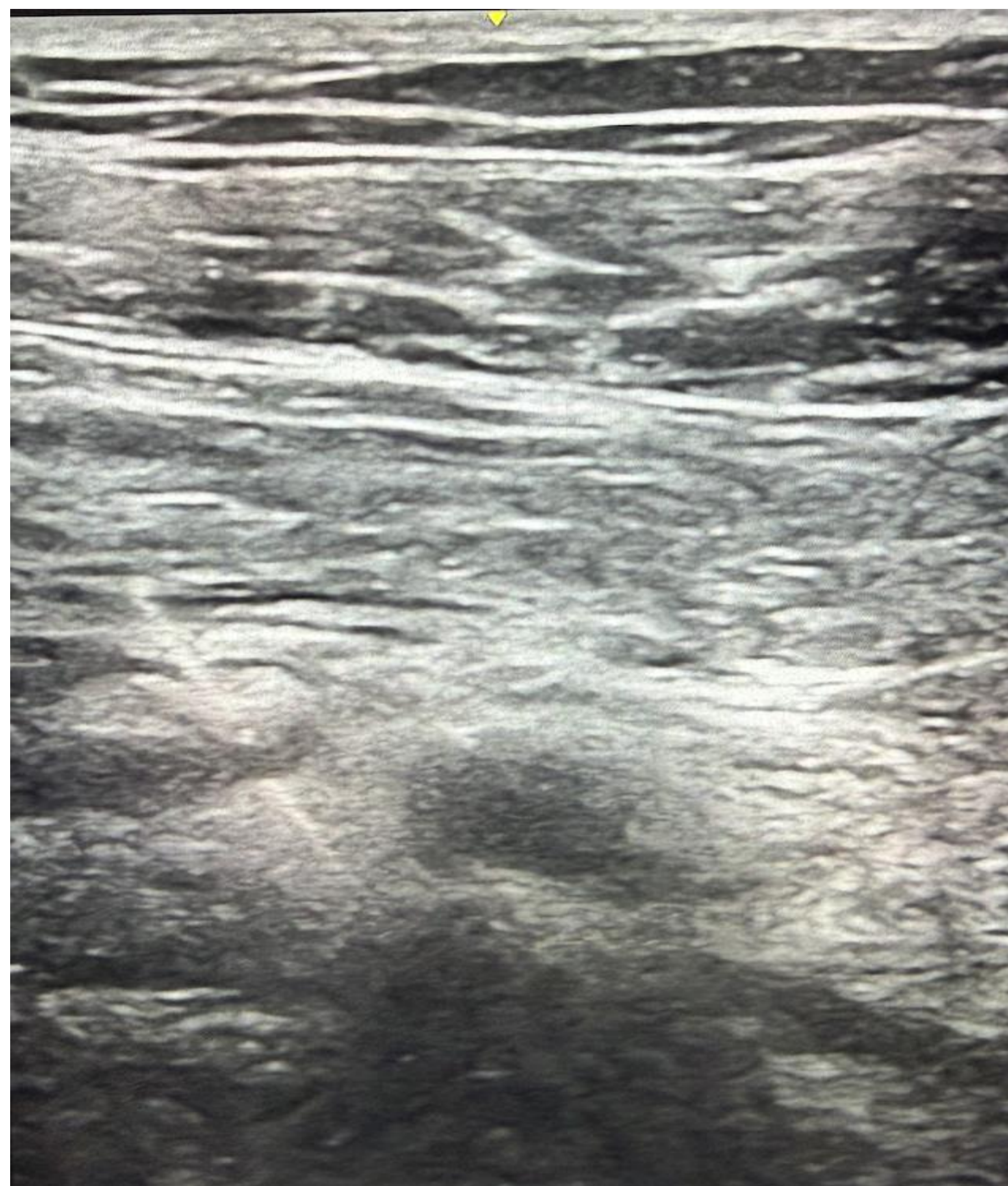
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BACKGROUND

Local anesthetic systemic toxicity (LAST) is a rare but potentially fatal complication of regional anesthesia.¹ LAST frequently begins with neurologic symptoms and can rapidly progress to severe multiorgan dysfunction.² In this report, we describe a case of LAST occurring after an ultrasound-guided infraclavicular nerve block.

Case Report



Case Report

A 35-year-old, 86kg, male with a history of hyperlipidemia presented for an elective wrist arthroscopy with triangular fibrocartilage complex repair. Planned for an infraclavicular brachial plexus block as the intended primary anesthetic.

Timeout completed and Infraclavicular brachial plexus visualization obtained.

Incremental injections (5ml) totaling 20 mL of 0.5% plain bupivacaine were administered with repeated negative aspiration and good visualization of local anesthetic spread.

Upon completion of the final injection, patient reported a metallic taste in his mouth and lightheadedness, followed by abrupt loss of consciousness, generalized seizure-like activity, and bradycardia.

Advanced cardiac life support measures were initiated. The airway was supported with a nasal airway and oxygen via Ambu Bag.

Intravenous lipid emulsion therapy in three 50-mL boluses, followed by a continuous infusion of 0.5 mL/kg/min. Patient given Midazolam 4 mg IV and Lorazepam 2 mg IV to reduce the seizure-like activity.

The patient regained consciousness, was oriented, and was transferred to the ICU with nasal canula supplemental O₂. Labs were drawn during the event, demonstrating mixed metabolic and respiratory acidosis.

Noted to be in atrial fibrillation with RVR and was started on Amiodarone. Pulmonary edema was noted on chest x-ray, which was treated with two doses of Furosemide 20mg IV with resolution.

Patient improved and was discharged home on hospital day two.

Discussion / Risk Reduction Strategies

- Local anesthetic systemic toxicity may initially present with subtle neurologic symptoms before rapidly progressing to multiorgan involvement
- A lack of heme aspiration may not be a reliable marker. Providers may reduce probe pressure to improve aspiration detection
- Consider risk reduction strategies, such as choosing an alternative anesthetic agent or using nerve stimulation
- Epinephrine may be used as an intravascular marker during peripheral nerve blocks, with doses of 10–15 µg demonstrating approximately 80% sensitivity when heart rate increases by ≥ 10 beats/min or systolic blood pressure rises by ≥ 15 mm Hg.³ However, Epinephrine over a threshold dose of 10 mcg/kg impairs lipid resuscitation from bupivacaine overdose
- Early detection and immediate treatment are essential for preventing progression to severe complications

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