You are looking after a 30 year old woman with an isolated femur fracture, and decide to help manage her pain with a nerve block. Unfortunately, your ultrasound machine was broken so you attempted to do the femoral nerve block blind, using bupivacaine. Shortly after injecting the anesthetic, she complains of a headache, dizziness, and numb lips. Then she loses consciousness. You glance at the monitor and notice a wide complex tachycardia.

**MY APPROACH**

Get help in the room and start your standard ACLS protocols.

Warn the team that this might be a prolonged code given its toxicologic etiology and the young, otherwise healthy patient. Focus on good quality compressions and maintaining good cerebral blood flow.

**Sodium Bicarbonate**

- Bupivacaine is a sodium channel blocker, so treat any wide complex by pushing amps of sodium bicarbonate
- In a prolonged resuscitation, if the pH rises about 7.5 you can switch to hypertonic saline or sodium acetate

**IV lipid emulsion therapy**

- Initial bolus of 1.5ml/kg (approx 100ml in 70kg adult)
- Start an infusion of 0.25ml/kg/min (approx 1L/hr in 70kg adult) for 30-60min (you can can double this rate if needed)
- Repeat the bolus at 5 minutes if ongoing cardiovascular instability

If there are seizures
Focus on use of benzodiazepines
- Phenobarb is probably the best second line
- Avoid phenytoin
- Probably avoid propofol as well, as it is a direct cardiac depressant

**Methemoglobinemia**

Bupivacaine is not usually associated with methemoglobinemia, but if you were using a mixture of anesthetics, consider and treat with methylene blue 1-2mg/kg IV.

If not improving, consider transfer to an ECMO centre.

**NOTES**

Epinephrine may reduce the efficacy of lipid therapy. Dr. Weinberg of lipidrescue.org suggests a decreased epi dose of less than 1mcg/kg for treating hypotension.

**OTHER FOAMED RESOURCES**

- Intravenous lipid emulsion as antidote on Resus.me
- Intralipid - myth or miracle? on LITFL
- Bupivacaine toxicity Rx on OpenAnesthesia
- lipidrescue.org
- Lipid Rescue: Why Aren't We Using It? on ALiEM

**REFERENCES**


