



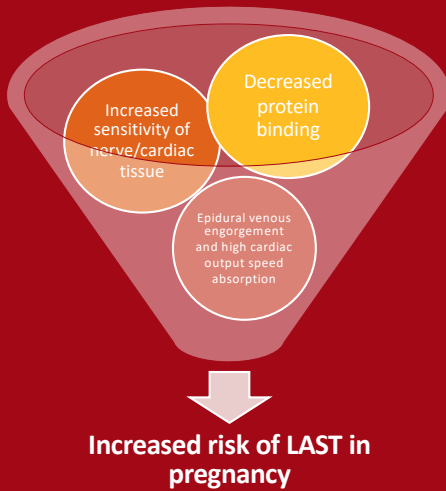
Lipid emulsion for treatment of neurologic symptoms of systemic bupivacaine toxicity after labor epidural placement

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Introduction

Due to physiologic changes of pregnancy, parturients are at increased risk of local anesthetic systemic toxicity (LAST). We present the case of a parturient who was treated with lipid emulsion therapy after exhibiting neurologic symptoms secondary to an intravascular epidural catheter.



Case Presentation

A healthy 73kg primiparous woman at term received an epidural catheter for labor pain relief. Aspiration of the catheter revealed no blood or fluid, and a test dose of lidocaine with epinephrine was administered with no noted effects. One hour later she complained of worsening pain, dizziness, metallic taste and perioral numbness. In total, she had received the following epidural medications:

10mL $\frac{1}{4}$ % bupivacaine	} 40mg bupivacaine
5mL $\frac{1}{8}$ % bupivacaine	
14mL $\frac{1}{16}$ % bupivacaine + fentanyl 2 mcg/mL	

Case (continued)

Blood was aspirated from the epidural catheter at this time. Although there were no EKG changes, the patient reported worsening dizziness and somnolence. A 100mL lipid emulsion bolus was administered with rapid symptomatic improvement. Once symptoms resolved, a combined spinal-epidural was placed without further complications. Seven hours later she delivered a healthy infant. The infant was briefly admitted to the NICU due to presumed maternal chorioamnionitis; mother and baby were discharged on post-partum day 2 in good condition with no apparent complications

Lipid resuscitation successfully used to treat neonatal LAST (Lin, 2010)

Multiple case reports of lipid TPN in pregnancy with no adverse outcomes (Bern, 2011 and Theilla, 2017)

Difficult to obtain good safety data

Pulmonary lipid emboli in premature infants on TPN (Levene, 1980)

One report of placental fat deposits after 8 weeks of maternal treatment (Jasnosz, 1995)

Lipid Emulsion Therapy in Pregnancy

Evidence for safety

Potential risks

Discussion

Prompt treatment with lipid emulsion is a life-saving treatment for severe LAST events, but there is limited evidence for its safety in pregnancy. While it is clearly indicated in cases of cardiovascular collapse, the role of lipid emulsion for treating milder neurologic symptoms remains unclear. Our patient was successfully treated with lipid emulsion with no apparent adverse effects.

References

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