• Bupivacaine still enjoys a positive safety profile in neuraxial anesthesia with the caveat of well known neurotoxic and cardiotoxic effects at supratherapeutic levels.
• Animal studies have demonstrated efficacy of intravenous lipid emulsion in resuscitation from local anesthetic toxicity (1,2).
• Efficacy in the human population is largely based on case reports of which less than fifty were available in a recent English language literature search.
• Many fewer case reports are available regarding the pediatric population necessitating speculation from the adult population.

**Case Presentation**

- 10.8 kilogram, 13 month old male born at 28 weeks via cesarean section with Beckwith–Wiedemann syndrome.
- Omphalocele repair was performed at two days post partum. Tracheostomy was performed at five months of age.
- Scheduled for flexible bronchoscopy, pressure equalization tubes, orchiopexy, and inguinal hernia repair.
- To the OR utilizing home ventilator.
- HR, arterial BP, SPO2, ETCO2, and temperature were continuously recorded.
- General anesthesia was induced with sevoflurane via the in situ tracheostomy.
- The bronchoscopy was performed without complication followed by examination of the ear canals without tube placement secondary to stenosis bilaterally.
- HR remained in the 130-140s, SBPs in the 80-90s, SPO2 in the mid to upper 90% range, and ETCO2 in the mid 30s throughout the proceedings.

**Intraoperative Course**

- A 22g IV catheter was introduced into the caudal space followed by aspiration without evidence of blood or CSF. 1mL test dose of 0.25% bupivacaine without hemodynamic alteration to include T wave morphology.
- The remaining 9mL of the solution were introduced in like manner and the patient was returned to supine position.
- Approximately 30 seconds into the skin preparation the HR fell from the 140s to a nadir in the mid 70s over the following two minutes.

- No change was noted in T wave morphology though the QRS complexes displayed were significantly widened with loss of P waves.
- The patient’s BP decreased from 92/47 to a nadir of 41/13. He was manually ventilated with SPO2 remaining in the mid to upper 90s.
- Hemodynamic instability prompted retrieval of the Intralipid from the center core.
- 10mL of the 20% solution were administered over 30 seconds. Within 30 seconds the HR began to climb peaking in the 130s with narrowing of the QRS complexes and return of P waves. SBPs likewise returned to baseline.

- After some 12 minutes of monitoring the remaining procedures were performed without further complication noted during the remainder of his hospital course.

**Conclusions**

• The first case report of successful resuscitation from presumed LAST was only eight years ago in 2006 (3).
• In 2006 of 91 academic anesthesiology departments surveyed 74% would not use lipid emulsion therapy in the case of suspicion of LAST (4).
• As recently as 2009 studies question the efficacy or detriment of epinephrine in LAST when used in combination with lipid emulsion (5).

**References**


*The preceding findings were noted in the course of clinical duties. They do not necessarily reflect the endorsement nor views of the San Antonio Uniformed Services Health Education Consortium or the Department of Defense.