Emergent Intraoperative Intraosseous Catheterization During Cesarean Delivery in a Morbidly Obese Parturient with Sudden Loss of Intravenous Access

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Background

In a morbidly obese parturient whose vitals are unstable, obtaining IV access may be difficult and intraosseous access may be utilized to provide rapid resuscitation

The humerus is the recommended intraosseous site for obstetric resuscitation as it bypasses aortocaval compression and supports higher flowrates than the tibia

Intraosseous cannulation of the tibia has been found to be 30-40% more successful than proximal humeral insertions

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Kehrl, T., Becker, B. A., Simmons, D. E., Broderick, E. K., & Jones, R. A. (2016). Intraosseous access in the obese patient: assessing the need for extended needle length. *The American journal of emergency medicine*, *34*(9), 1831-1834.

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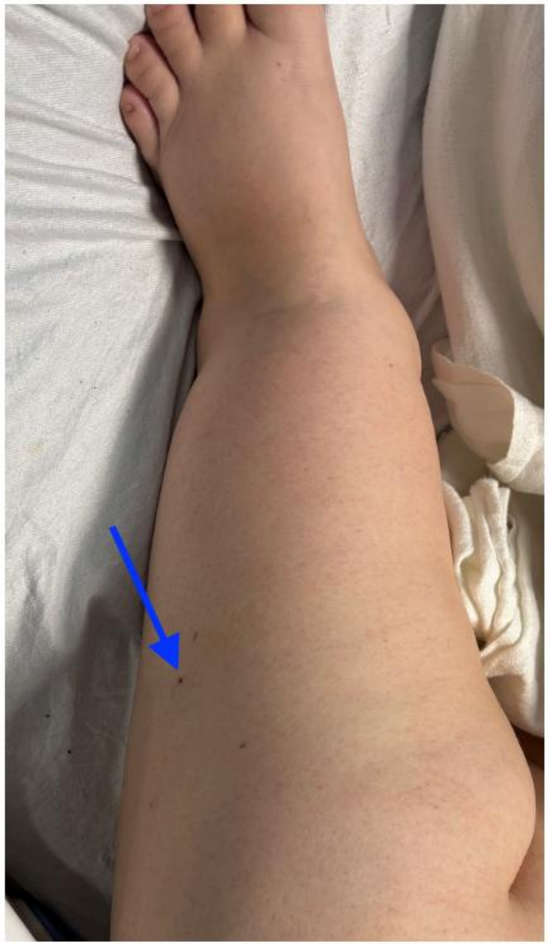
The Case

32yo female with BMI 64 presented for repeat caesarean delivery → CSE placed to achieve T4 anesthetic level → IV infiltrated prior to incision, BP 65/45, no visible vein targets

50mg ephedrine IM given, Trendelenburg, left lateral table tilt → Attempt for upper extremity US-guided IV and search for IO landmarks begun → The greater tubercle of the humerus and the tibial tuberosity were not palpable

IO placed 3cm below the inferior margin of the patella and 2cm medial → Intraosseous crystalloid and vasopressors given → FHR remained stable, US guided IV placed, case proceeded uneventfully



Teaching Points

Obtaining rapid access in the patient was difficult and required intraosseous cannulation.

Blind intraosseous cannulation of the tibia established access quickly so resuscitation could begin while an ultrasound guided IV was placed.

The proximal tibia can be a good option for intraosseous cannulation in the parturient because it is a presumably larger target than the proximal humerus, it is more likely to be successfully cannulated in a blind attempt, and the patient is insensate in the lower extremities from the epidural.