

Benefit of Neuraxial Ultrasound-Guided Mapping for Epidural Blood Patch Placement and Treatment of
Lumbosacral Radiculitis Following Repeat Epidural Blood Patch

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Introduction

Post-dural puncture headache (PDPH) is an unfortunate complication that can occur after accidental dural puncture (ADP) during epidural placement. Epidural blood patch (EBP) is the most definitive treatment of this condition but may have its own failure rates and complications.

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Case presentation

28-year-old Japanese G1P0 full-term parturient

- BMI 22.58 kg/m² (152cm and 52kg)
- requesting epidural analgesia for labor analgesia.

Post-partum #1

She developed an incapacitating PDPH warranting an Epidural blood patch(EBP).

EBP: Lateral decubitus position, by the most experienced provider using ultrasound-guided mapping

- measurement of depth(distance to the posterior complex): around 3.2 cm at the level of L4-L5
- Injection of 20 ml of autologous blood

PP#5

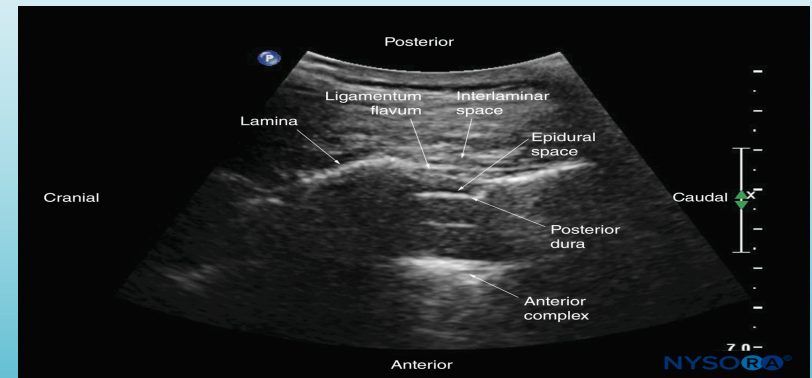
- Recurrence of the symptoms
- Repeat EBP: 2 levels
- 15 ml at L2-L3 level, 5 ml at L3-L4

6 days later

- Radiculitis, clinical diagnosis, No imaging.
- Gabapentin ,Symptoms resolved in a week

Procedure

- The patient had an unexpected shallow epidural depth
- the procedure was complicated by two dural punctures with the second puncture recognized as an intrathecal catheter placement.
- The intrathecal catheter was kept for labor analgesia.



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Figure 1: Neuraxial Ultrasound- Transverse view to measure the depth by measuring the distance to the posterior complex

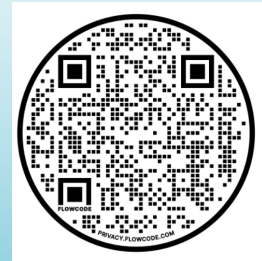
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Learning Points

- ✓ Previous studies demonstrated ethnicity, weight and BMI differences in the depth of the epidural space. Asian ethnicity, low BMI and weight were predictive of shallow epidural space depth.
- ✓ Lumbar ultrasound neuraxial mapping can be a useful tool for the anesthesiologist to measure this depth in the obstetric population in pre-epidural insertion for labor analgesia or for epidural blood patch as a treatment for PDPH in order to minimize complications.
- ✓ In the case of more than one dural puncture, we suggest to perform one level EBP each time to reduce the risk of meningeal irritation.
- ✓ Question whether steroids may play a role for treatment of radiculitis post-EBP.
- ✓ Gabapentin was shown to be an effective treatment.

SCAN HERE !!!



Summary. By Nour El Hage Chehade