
Ultrasound to identify the cause of unilateral caudal anesthesia

The caudal epidural block is a commonly used technique to provide surgical anesthesia and analgesia in children. It is performed by inserting a needle through sacral hiatus into sacral epidural space. The caudal epidural block was first introduced as landmark-based blind technique; however, the failure rate of the same is 4–26% even in experienced hands.^[1] Herein, we report a case of the unilateral caudal block in a 1-year-old male child weighing 9 kg, scheduled for left congenital talipes equino varus, as a daycare procedure. In the operating room, after attaching standard monitors, routine induction was done with appropriate dosages of fentanyl, propofol, and sevoflurane on spontaneous mask ventilation to provide caudal anesthesia. The caudal block was given by an experienced anesthesiologist in left decubitus position, by landmark technique after identifying posterior superior iliac crests and sacral hiatus, with a slow injection of 7 mL of 1% lignocaine and adrenaline 1:2 lakh. Assessment of block was

done every 5 min and the patient had a motor and sensory blockade of right lower limb (nonsurgical) after 20 min and no blockade was achieved on the left side, suggesting the spread of drug towards the right side of caudal space. Our differential diagnosis was the presence of congenital fibrous band/filum terminale, which stopped the spread of drug to the other side. The case was conducted under general anesthesia.

To confirm the same, we used ultrasound by using a high-frequency linear probe. The ultrasound transducer was first placed transversely in the midline to obtain a transverse view of sacral hiatus. The two sacral cornua, sacrococcygeal ligament (SCL) and body of the sacrum were visualized, there was a hyperechoic structure in the midline below SCL [Figure 1]. The orientation of the probe was changed into the sagittal plane, sacrum and coccyx, sacrococcygeal

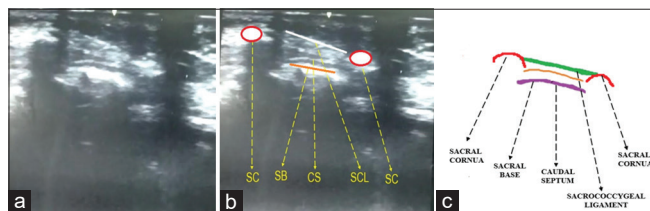


Figure 1: In the transverse plane, (a) ultrasonography image (b) marked ultrasonography image (c) line diagram showing two sacral cornua (SC), sacroccygeal ligament (SCL), and body of the sacrum (SB), there was a hyperechoic structure in the midline below SCL suggesting caudal septum, marked as (CS)

ligament, the body of sacrum, caudal space could be seen we saw the thick hyperechoic line, which was starting from coccyx towards the sacral area, same structure was seen in the midline, when the probe was moved left/right, the structure disappeared. This structure could be a fibro-fatty structure, suggesting the presence of a fibrous band/septum. The unilateral block is rare with caudal anesthesia. Causes of unilateral caudal anesthesia can be misdirected needle or anatomical difficulties or congenital fibrous/connective tissue bands in the caudal epidural space. We emphasize the importance of ultrasound when performing caudal epidural injection to identify the anatomical details and avoiding complications and failed block.

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Conflicts of interest

There are no conflicts of interest.

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