Abstract # 103

Retained Epidural Catheter Fragment after Combined Spinal Epidural for Labor Analgesia

Abstract Type: Case Report/Case Series
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Introduction: The breakage of an epidural catheter is a rare complication of neuraxial labor analgesia. We report the breakage and retention of a labor epidural catheter during its removal at the L3-L4 interspace.

Case Report: A healthy 19 year-old G3 P2 parturient presented in preterm labor at 30 weeks gestation. Despite administration of indomethacin for tocolysis, the patient continued to progress in labor, eventually requesting neuraxial labor analgesia at 4cm cervical dilation. An uneventful combined spinal-epidural technique was performed at the L3-L4 interspace, and a 19G Arrow™ flexible single-orifice epidural catheter was placed 5cm in the epidural space without difficulty. Following an uneventful vaginal delivery, initial attempts at removal of the epidural catheter were met with resistance. To facilitate removal, the patient was placed in sitting position with flexion of her lumbar spine; application of the gentle traction resulted in the removal of 4cm of the catheter before more resistance was met. Extension of her lumbar spine resulted in the removal of an additional 3cm. Finally, a return to flexion of her lumbar spine resulted in removal of a sheared catheter. Immediate CT imaging revealed 2.5cm of the distal tip remaining between the L3-L4 spinous processes with minimal extension into the dorsal epidural space. As the patient reported no symptoms from the retained catheter at the time, neurosurgical consult recommended conservative management and follow-up.

Discussion: Several factors can lead to the breakage of an epidural catheter, such as the characteristics of the catheter itself, patient anatomic factors, and the difficulty of the procedure. Interestingly, in a study comparing the strength of the Arrow™ reinforced catheter (the same type used in this case) vs. other non-reinforced epidural catheters, Asai et al. found the Arrow™ catheter broke at lower weights than the others.1 If difficulty during catheter removal is encountered, multiple maneuvers are suggested to prevent breakage, including exaggerated flexion or extension of the lumbar spine, or securing the catheter under tension with interval attempts at removal.2 As was the decision for this case, conservative management of retained catheters is recommended, with surgical intervention reserved for those with infectious or neurologic complications.3

References
2. Hobaika AB. Rev Bras Anesthesiol 2008; 227