

Management of rare spinal needle fracture during elective caesarean section: a case report

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Background

Spinal needle fractures, although rare, represent a significant and potentially serious complication during procedures such as lumbar punctures, epidural anaesthesia, and spinal injections. A snapped needle can lead to patient discomfort, infection, and in some cases, nerve damage¹.

The presence of a fractured spinal needle in the back may go undetected if not properly identified and often requires careful clinical and radiological evaluation to diagnose¹. Factors contributing to needle fracture include improper technique, excessive force, or use of suboptimal equipment. Despite its infrequent occurrence, the implications of a snapped spinal needle warrants attention, as timely intervention is critical to prevent long-term complications.

Case Report

A nulliparous female, presented for an elective caesarean at 36+1 weeks gestation with DCDA twins. During the attempted spinal anaesthetic, there were multiple failed neuraxial attempts. The failed spinal attempts were at the level of L4/5 and L5/S1 with a standard 22G whitacre needle. An attempt was made at L4/L5 with long 127mm 25G whitacre which was unsuccessful. Retrospectively, it was noted that the distal 4cm portion of the long 127mm 25G whiteacre needle was missing. A lateral XR was obtained, with babies shielded, showing a thin radiodensity located just to the right of the L3 vertebrae (Image A). The caesarean section was abandoned, and AR was admitted to the ward. It was decided that the caesarean section would be reattempted the following day and post delivery a CT spine would be obtained. The following day the spinal anaesthetic was successful and AR proceeded to have an uncomplicated lower segment caesarean section. The CT spine confirmed that the spinal needle fragment was adjacent to the L3 vertebral body (Image A).

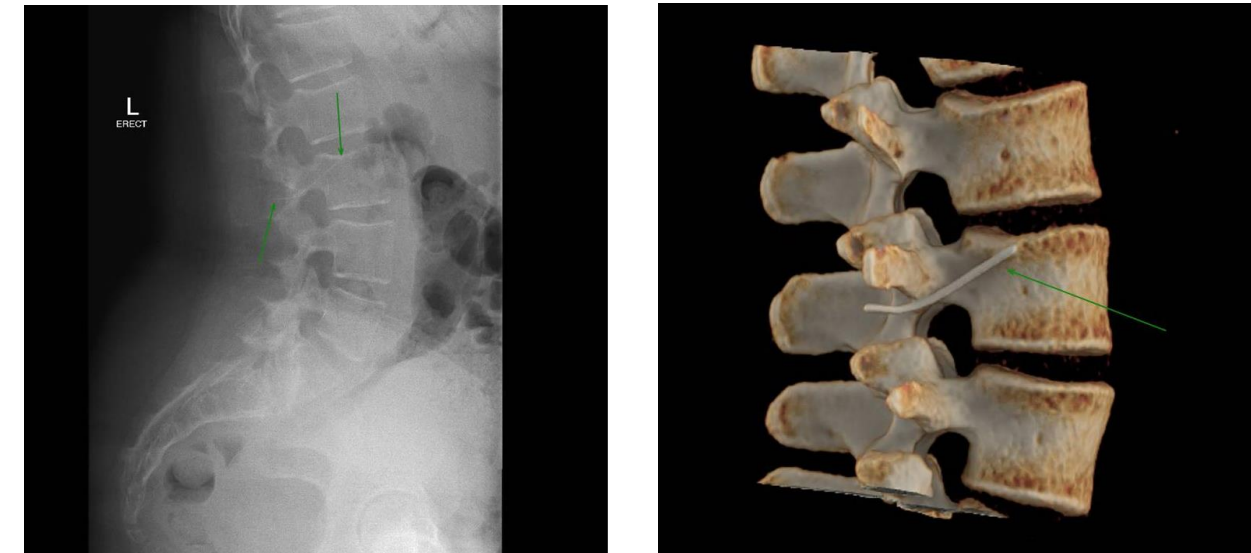


Image A: Lateral XR (left) and CT spine (right) showing foreign body at L3 vertebral level.

Operative Management and Findings

Day 2 postnatally she returned to theatre for removal of the foreign body with the Spinal surgeons. With a right sided Wiltse approach, the foreign body was found under the right lamina of L3 and removed in full with a II check post to confirm no foreign body remained.

Discussion

In conclusion, spinal needle fractures, though rare, can pose serious risks to patient safety during procedures like lumbar punctures, epidural anaesthesia, or spinal injections. In this case, the fractured needle was promptly identified and managed through a multidisciplinary approach involving radiological evaluation and surgical retrieval. The successful removal of the needle and the patient's recovery emphasize the importance of early detection and appropriate intervention to prevent complications.

References

1. Hunt, R. W., & Gorrell, J. H. (2003). Spinal needle fractures: A review of the causes and management. *British Journal of Anaesthesia*, 91(5), 767-773.