

Multiple Kinking in a Single Epidural Catheter; Rare Complication or a Defect in the Catheter?

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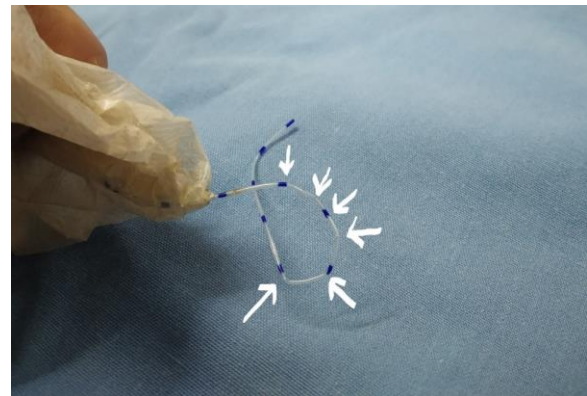
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An 8-year-old, 13 kg female patient suffering from Down's syndrome was planned for a vesicostomy under general and epidural anaesthesia. The patient was induced, and after securing the airway, was positioned laterally for lumbar epidural catheter insertion. The epidural space was obtained at 3 cm in the midline, by loss of resistance to saline at the L1-L2 interspace, with a 19 G Portex® epidural needle. The catheter was inserted cephalad and after confirming negative aspiration for blood and cerebrospinal fluid and giving a test dose (2ml of Lignocaine 2% with Adrenaline 1:200000) it was fixed at 7 cm at skin with a Tegaderm® dressing, leaving 4 cm of the catheter in the epidural space. Intraoperative bolus dose of local anaesthetic (LA) was given without any resistance. Top up dose of local anaesthetic was given 6 hours post operatively (PO) and the patient had adequate pain relief. On the second PO day resistance was felt while giving epidural dose. On examination the catheter insertion site was normally fixed. The resistance remained the same even after the catheter was detached and reattached to the connector and bacterial filter. It was then decided to remove the catheter. During removal, the initial 1-2 cm came out easily followed by a higher-than-normal resistance but came out completely on withdrawing including the blue tip. On inspection, there were around 6 kinks on the catheter (Figure 1).

Figure 1- Multiple kinks observed in the withdrawn catheter



In literature, there are reports of epidural catheter kinking [1-5], but only 1 or 2 kinks were reported. In the present case around 6 kinks were present in the same catheter. Portex epidural catheter is made up of polyether block amide which is claimed to have optimum strength and kink resistance. But size being used in the paediatric age group being of a smaller gauge perhaps have more chances of kinking especially in patients who move more postoperatively. Beamer et al had described a simple test to find out if the catheter is prone to kinking by bending it on itself [6]. This technique may be used to predict if the catheter will be successful or not and also to avoid using any defective pieces.

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