

An Unusual Complication of a Usual Guidewire during Central Venous Cannulation

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Sir,

Central venous cannulation (CVC) is an invasive procedure routinely done in intensive care units (ICUs) and operating room (OR) for various indications like vascular access, vasopressor administration, hemodialysis, and hyperalimentation.¹ The most commonly used technique is the Seldinger technique where catheter is guided over the guidewire.² However, the placement of central venous catheters is not without complications. The complications can be mechanical (5–19%), infectious (5–26%), and thrombotic (2–26%).³ The complications related to guidewire like kinking, knotting, bending, or lost guidewire are grossly under-reported.^{4,5}

We report a rare case of guidewire-related complication, where the guidewire got kinked inside the vascular access cannula. We planned an elective CVC of right subclavian vein for vascular access in a patient who had all his peripheral veins thrombosed for intraoperative use. After aseptic precautions and following maximum barrier precautions, we started right subclavian vein cannulation with an 18-G cannula with a side port for guidewire insertion. We successfully identified the subclavian vein at first attempt using traditional landmark-guided technique. When we tried passing the guidewire through the side port, it got struck and we could not pass any further or pull it back. On inspecting the cannula, we found that the J tip of guidewire made a V turn to the other side port and got struck, even with minimal force, the guidewire could not be removed, and with much force, it caused uncoiling of the guidewire (Fig. 1). This is a serious situation because the entire cannula and the guidewire assembly should be removed in

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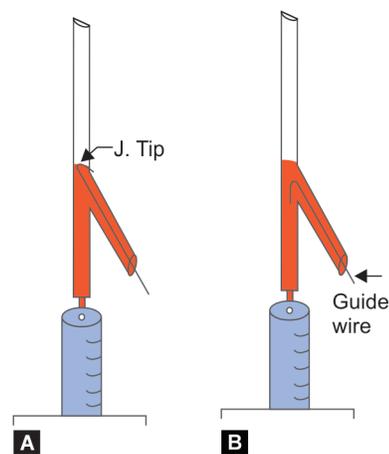
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toto, and it becomes unusable. This is a serious problem in patients with difficult CVC and patients with coagulopathy where the entire procedure should be performed again with a new CVC kit causing bleeding complications and adds on to the cost. This complication was never mentioned in the literature to the best of our knowledge, and it is a unique complication pertaining to side port cannulas. We encountered two such instances in our practice, so we thought of reporting this unique complication with the side port cannulas.

We recommend to pass the guidewire slowly until it passes the Y junction of the cannula so that the J tip does not get struck in the other side port (Fig. 2A). We also recommend to rotate the guidewire such that the J tip faces away from the side port (Fig. 2B). By these maneuvers, we can potentially avoid this unique complication of CVC with side ports.



Fig. 1: The struck guidewire in the side port



Figs 2A and B: The J tip position in relation to the side port

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