



Fracture of the insertion cannula during retrograde intubation: a rare complication

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Dear Editor,

Retrograde intubation is an option in cases of difficult airway access, especially in developing countries where a flexible fiberoptic bronchoscope is not available because of cost/expertise issues. The success of retrograde intubation depends on personal expertise and technical skill [1]. Here, we report a case of a unique complication encountered during this procedure.

A 30-year-old man was scheduled to undergo elective surgery for faciomaxillary trauma. Retrograde nasal intubation was planned for this patient because of limited mouth opening and the use of interdental wiring in the postoperative period. We also practice retrograde intubation as part of the training program for post-graduate anesthesia trainees. Fiberoptic equipment was used as a backup. Written informed consent was obtained from the patient and anesthesia was induced with fentanyl 100 mcg and propofol (110 mg); after checking for bag and mask ventilation, the mouth opening seemed better and vecuronium (6 mg) was administered intravenously. The neck area was prepared and an 18-gauge cannula was inserted through the cricothyroid membrane, and after

confirmation of tracheal placement by the aspiration of air, the stylet was removed. A ureteral stent to be used as a guidewire was inserted and retrieved easily through the nose. While removing the cannula from the neck, we found that the catheter was fractured at the hub with the plastic cannula still inside the trachea. Generally, the guidewire is removed from the endotracheal tube (ETT) end after the ETT is confirmed to be in place. However, here, since the catheter broke at the hub, we chose to remove the guidewire from the neck area after the ETT was inserted and confirmed to be in place, and the broken part of the catheter was easily retrieved and railroaded over the guidewire (Fig. 1).

Intravenous catheter fractures have been previously reported in peripheral and central vein cannulations [2,3]. This is the first time we are reporting it in a case of retrograde intubation where it could have been proven to be dangerous had the guidewire been pulled out through the ETT and the fractured part would have been retained in the trachea or pushed in the bronchus. Catheter fracture may occur because of either the low quality of the cannula or due to excessive pulling on the guidewire

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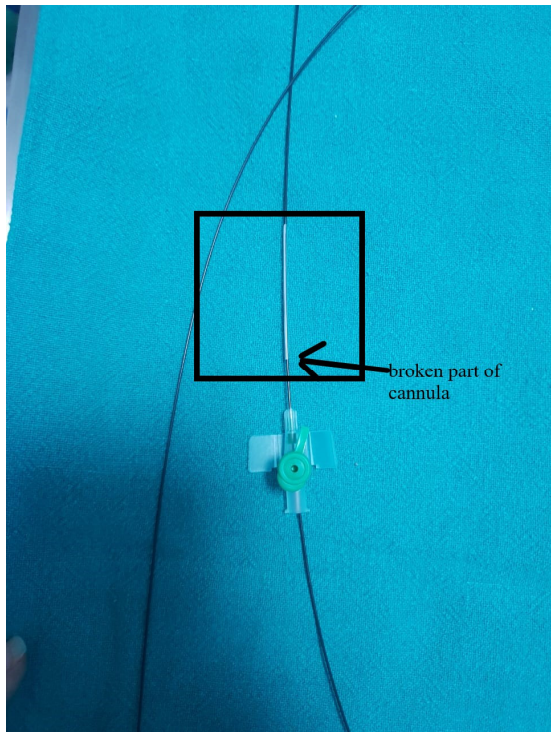


Fig. 1. The fractured cannula, as shown in the inset, is loaded on the guidewire used for retrograde intubation.

to keep it taut while railroading the endotracheal tube.

The important learning point here is to pull the guidewire from the distal end rather than pulling from the endotracheal tube side while removing it when using intravenous cannulas for retrograde intubation. Anesthesiologists should be aware of this potentially preventable complication during retrograde intubation.

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Neha Singh: Conceptualization, Data curation, Formal analysis, Methodology, Supervision, Validation, Writing - review & editing

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