

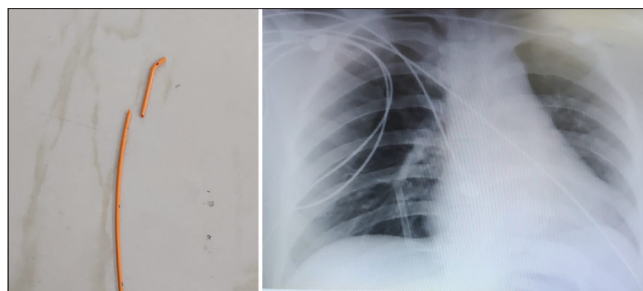
## Broken bougie: A thrilling nightmare - A case study

Dear Editor,

For patients in the intensive care unit (ICU) who need emergency tracheal intubation, failure to get the endotracheal tube (ETT) into the trachea on the first try can occur in up to one-fifth of patients and may lead to severe hypoxaemia and cardiac arrest.<sup>[1]</sup> In patients with inadequate laryngoscopic views, a tracheal tube introducer (or 'bougie') increases the chance of success. Typically, it is placed directly into the trachea through the side of the mouth, allowing for better control of the curved tip through rotation of the bougie before ETT can be railroaded. Here, we present a situation in which a fresh, single-use bougie got stuck during withdrawal and fractured into two pieces when force was applied.

Emergency intubation in the ICU was required for a 22-year-old male patient with acute flaccid paralysis. The patient received intravenous propofol 120 mg and fentanyl 100 µg. A new bougie (5 Ch OD 5.0 mm, length 650 mm) was successfully inserted without lubrication under direct laryngoscopy until resistance was felt to assist the intubation procedure in the first attempt, and ETT (7.5 mm ID; Smiths Portex, Minneapolis, MN, USA) was railroaded over it. The bougie got stuck during removal, and when force was applied, it was broken into two pieces, and the distal part slipped into the airway. However, the patient had satisfactory breathing and was adequately ventilated. An immediate chest X-ray revealed a bougie in the distal portion of the right lower lung [Figure 1]. The patient was transferred immediately to the operating room, where a bronchoscopy was performed, and the broken component was removed using biopsy forceps through the ETT.

The hollow nature of the bougie's quality seems compromised, making it a weaker instrument. Protecting spontaneous breathing during removal is a typical tactic to reduce the possibility of a partial proximal obstruction turning into a complete obstruction. During removal, effective team communication is essential. After removal, it



**Figure 1:** Chest X-ray image shows a bougie in the distal area of the right lower lung, whereas the image on the left shows a shattered bougie

is advised to look for the integrity of the tracheal tube introducer device with special attention to its distal tip, which can break and get stuck in the ETT during withdrawal when performing bougie-assisted intubation.<sup>[2]</sup> It is recommended to use a lubricant on the bougie, which may make its removal easier. A trial is required to ascertain the amount of force to remove different bougies from different tracheal tubes.

This incident taught us to double-check the bougie's quality in terms of flexibility, cracking, stiffness and loss of shape during manipulation before using it to assist with intubation. Therefore, it is advised that all anaesthesiologists examine the introducer's quality before employing it in difficult airways and use solid introducers rather than hollow ones because they have a lesser risk of breaking.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understand that his names and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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