Bailout in a resource-limited emergency pediatric bronchoscopy setting

Dear Editor,

Bronchoscopy in pediatric patients, inherently a complex procedure, gets compounded due to significant variations of duration and invasiveness of the procedures and non-availability of appropriately sized instruments. Hence, we must adapt quickly to the "situational and procedural changes."[1] We wish to present one such scenario and the novel solution we adopted. Following the distal migration of broken pieces of outer shell of groundnut in an eight-month-old baby after removal of the major chunk by rigid bronchoscope, we had to resort to using a flexible forceps that was compatible with only a 3.5-mm flexible bronchoscope at our setting. Unfortunately, this could not be concurrently employed with 3.5-mm endotracheal tube (ETT) we inserted after rigid bronchoscopy and we did not have jet ventilation equipment. Hence, we adapted to the situation by utilizing a 4.5-mm ETT, being attached to the insufflation port of the 3.5-mm flexible bronchoscope, as a conduit to a Jackson-Rees circuit without a bag-tail valve [Figure 1] for oxygenation and intermittent ventilation during the flexible bronchoscopy. We removed the ETT after making this arrangement and the remnants of the foreign body were removed using this rescue measure.

Apneic oxygenation (with nasal prongs, oxygen mask or Venturi mask); high flow nasal cannula; continuous positive airway pressure with a helmet or nasopharyngeal catheter; and intermittent jet ventilation are often described techniques of oxygenation employed during bronchoscopy.[2] Although there is a possibility of barotrauma in a non-intubated infant,[3] we believe that this novel technique would be handy for such type of situation in a resource-constrained emergency setting.

Financial support and sponsorship

Nil.

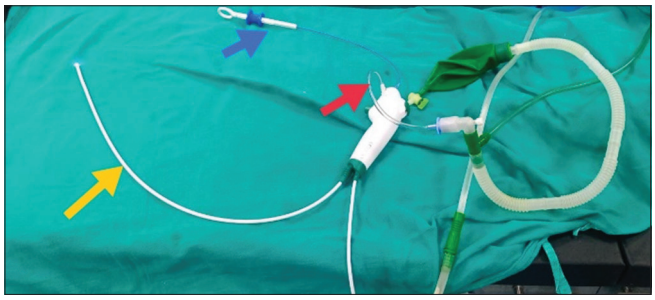

Figure 1: Depicting the use of a 4.5-mm endotracheal tube (red arrow) as a conduit, at insufflation port of 3.5-mm flexible bronchoscope, to a Jackson-Rees circuit. Blue arrow—flexible forceps guided along the working channel; yellow arrow—working channel of the flexible bronchoscope

Conflicts of interest

There are no conflicts of interest.

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Submitted: 07-Mar-2023, **Revised:** 08-Mar-2023, **Accepted:** 09-Mar-2023, **Published:** 02-Jan-2024

References

1. Wang JT, Peyton J, Hernandez MR. Anesthesia for pediatric rigid bronchoscopy and related airway surgery: Tips and tricks. Paediatr Anaesth 2022;32:302-11.
2. Pelaia C, Bruni A, Garofalo E, Rovida S, Arrighi E, Cammarota G, *et al*. Oxygenation strategies during flexible bronchoscopy: A review of the literature. Respir Res 2021;22:253. doi: 10.1186/s12931-021-01846-1.
3. Chan IA, Gamble JJ. Tension pneumothorax during flexible bronchoscopy in a nonintubated infant. Paediatr Anaesth 2016;26:452-4.

Access this article online	
Website: https://journals.lww.com/sjan	Quick Response Code
DOI: 10.4103/sja.sja_154_23	

How to cite this article: Kaushal B, Suresh V, Sethuraman RM, Senthil Kumar VS. Bailout in a resource-limited emergency pediatric bronchoscopy setting. Saudi J Anaesth 2024;18:145.