Awake Tracheal Intubation Using Flexible Bronchoscopy: Exploits With Two Cases in a Low-Resource Setting

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Background

Awake tracheal intubation using flexible bronchoscopy (ATI:FB) remains a core skill in managing difficult airways [1,2]. In low-resource settings, adequate logistics like fiberoptic bronchoscopes are scarce, limiting skill transfer[1,2]. Here, we highlight the success of two daunting ATI:FB cases at Ghana's Korle-Bu Teaching Hospital (KBTH), projecting implications for training and practice.

Introduction

Awake tracheal intubation using flexible bronchoscopy (ATI:FB) being done in a 39-year-old woman with a huge mandibular ameloblastoma. ATI:FB successful on the third attempt with patient now in the 75° semi-recumbent position and the operator facing her. KBTH, Ghana, 2023.

Firstly, a 39-year-old woman with recurrent mandibular ameloblastoma for excision. The tumour filled the oropharynx, restricting jaw movement, and narrowed the trachea. The scope failed to advance with the first two attempts, that is, with patient initially supine and then semi-reclined at 45°. The third nasotracheal ATI:FB was successful when patient was semi-recumbent at 75◦, with the operator facing her.

Secondly, a 20-year-old man with a gigantic left maxillary fibrous dysplasia for maxillectomy. The tumour densely filled the mouth, compressing the nares, and prevented a lubricated bronchoscope from passing at first attempt. A longitudinally split and lubricated nasopharyngeal airway was then inserted, admitting the bronchoscope.

20-year-old man with a gigantic fibrous dysplasia of the left maxilla densely filling oral cavity and flattening nostrils. Difficult airway managed with awake tracheal intubation using flexible bronchoscopy and, under general anaesthesia, left maxillectomy done. KBTH, Ghana, 2023.

Both cases were conducted in 2023 under general anaesthesia by anaesthesiologists with over two decades' experience; intraoperative periods, lasting 3.5 hours and 2 hours respectively, were uneventful. Extubation was done 16hours and 48hours postoperatively, respectively, once airway edema had minimized.

Discussion

Currently, over 70 anaesthesia trainees across 26 theatres in KBTH share limited access to only two fiberoptic bronchoscopes (Karl Storz and Ambu) for practice.

Learning Points

Learning Points: Success of ATI:FB is hinged on expertise and available logistics [1–3]. Performers gain confidence and perfection of skill through constant practice[1,2]. Documentation of special techniques and adjustments used in maneuvering unique airway anatomies remains crucial, especially where such data is limited[1,3].

Conclusions

In Ghana's low-resource setting, ATI:FB is not routinely performed, unlike in high-resource areas like the United Kingdom where thousands are performed annually[1,3,4]. That notwithstanding, even tough ATI:FB cases achieved success with minimal complications/ failure, when perseveringly performed with locally tailored adaptations[1].

References

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