

Unanticipated failed intubation in spite of good laryngeal view on direct laryngoscopy

Sir,

Airway anomalies, difficult airway or unanticipated difficult intubation can pose the most dreadful challenge for the anesthesiologist.^[1]

A 41-year-old female, with carcinoma breast, was scheduled for right modified radical mastectomy, left simple mastectomy and laparoscopic bilateral salpingo-oophorectomy. Preanaesthetic airway examination revealed short neck, double chin, buck teeth, and Mallampati grade III. The patient had undergone breast lumpectomy 5 years ago under local anaesthesia, which was uneventful.

There was no history of other co-morbidities, breathing difficulty, change in voice, prolonged medication or trauma. Preoperative investigations were within normal limits. In the operating room, standard monitors were connected, an intravenous line was secured, patient was pre-oxygenated, premedicated with intravenous midazolam 1 mg and fentanyl 100 µg, induced with thiopentone 250 mg, and relaxed with atracurium 25 mg after adequate mask ventilation.

Intubation was attempted after direct laryngoscopy with MAC-3 blade. Cormack-Lehane (CL) grade was found to be 1. A 7.5-mm cuffed endotracheal tube (CETT) could not be passed through the



Figure 1: Image showing significant subglottic narrowing as seen through an ambuscope

vocal cords. It was re-attempted with 7.0 mm, and then with 6.5-mm CETT, which was unsuccessful. A bougie was passed through the glottis but 6.0 mm CETT could not be rail-roaded. Hence, the patient was mask ventilated and a size 3 proseal laryngeal mask airway (LMA) was inserted, and adequate ventilation was maintained. An ambuscope was passed through the lumen of the LMA to view the glottis, which showed narrowing of the lumen below the glottis [Figure 1].

As we were able to maintain adequate ventilation through the LMA, we decided to go ahead with the surgery. Consent for tracheostomy was taken. Patient was reversed after adequate criteria were met and the LMA was removed. The postoperative period was uneventful.

Postoperatively, the patient was evaluated for subglottic stenosis. Computed tomography (CT) scan of neck revealed a normal supraglottis with a transverse diameter of 15 mm. There was glottic and subglottic narrowing with hour-glass configuration, the transverse diameter measuring approximately 5 mm and 6 mm, respectively, extending for a length of 11 mm; the tracheal lumen was normal [Figure 2].

At a later date, laparoscopic salpingo-oophorectomy was done under subarachnoid block with a standby difficult airway cart and consent for emergency tracheostomy. The surgery was uneventful.

Subglottic stenosis is a rare condition and is caused by congenital problems, post intubation injury, trauma, tumours and the like. An incidence of 4.9 cases/million years is estimated for post-intubation tracheal stenosis.^[2] Idiopathic subglottic stenosis (iSGS) is common in peri-menopausal women, which could be related to associated hormonal changes.^[3] Symptoms may include dyspnoea, hoarseness or stridor. Alternative causes include collagen vascular disease, an anatomic predisposition of the smaller female

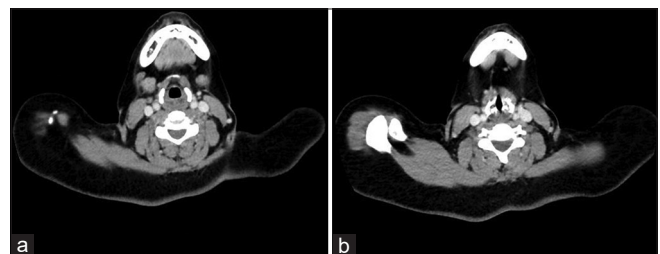


Figure 2: A cross-sectional CT image of normal trachea (a) Cross-sectional CT image of subglottic area (b) stenosed subglottic area

subglottis, mechanical trauma from coughing and gastroesophageal reflux disease. A diagnosis of subglottic stenosis (SGS) may be suspected based on the results of pulmonary function tests. The stenotic region can be seen with CT scan of the neck [Figures 1 and 2].

A mild case of SGS may not require treatment.^[4] Surgical procedures like endoscopic dilation/resection and end-to-end anastomosis can be done for severe SGS.

Multiple attempts at intubation by an unsuspecting team of anaesthesiologists, combined with an easy laryngoscopic view, can result in a life-threatening “cannot ventilate, cannot intubate” scenario, whereas forceful attempts may even lead to the damage of the laryngeal cartilages. Although it is tempting to continue attempts at intubation following a full view of the glottis, initial failure to intubate should lead to suspicion of SGS. In suspicious cases, oxygenation can be maintained with a supraglottic device; a fibrescope can be passed through this to evaluate the airway below the glottis, which can help in further airway management plan.^[5]

LMA has been found to be an effective alternative in a ‘cannot intubate’ scenario, the major advantage being avoidance of manipulation of an already compromised airway.^[6] CL grading can be deceptive. Hence, the ability to foresee complications and the mere preparation for a difficult airway at all times have proved to be prudent.

Declaration of patient consent

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

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

**Meghana Ravi, Archana Shivashankar, Geetha C. R.,
Tejesh C. A.**

Department of Anaesthesiology, M S Ramaiah Medical College,
Bengaluru, Karnataka, India

Address correspondence:

Dr. Meghana Ravi,
Department of Anaesthesiology, M S Ramaiah Medical College,
Bengaluru - 560054, Karnataka, India.
E-mail: meghanaravi04@gmail.com

Submitted: 24-Apr-2021

Revised: 24-Oct-2021

Accepted: 26-Oct-2021

Published: 23-Nov-2021

REFERENCES

1. Myatra NS, Shah A, Kundra P, Patwa A, Ramkumar V, Divatia JV, *et al.* All India Difficult Airway Association 2016 guidelines for the management of unanticipated difficult tracheal intubation in adults. *Indian J Anaesth* 2016;60:885-9.
2. D’Andrilli A, Venuta F, Rendina EA. Subglottic tracheal stenosis. *J Thorac Dis* 2016;8:140-7.
3. Aarnaes TM, Sandvik L, Brondbo K. Idiopathic subglottic stenosis: An epidemiological single-center study. *Eur Arch Otorhinolaryngol* 2017;274:2225-8.
4. Axtell AL, Mathisen DJ. Idiopathic subglottic stenosis: Techniques and results. *Ann Cardiothoracic Surg* 2018;7:299-305.
5. Raveendra US, Gupta A, Biswas S, Gupta N. Coping with Airway emergencies: Get, Set, Go! *Indian J Anaesth* 2020;64:168-74.
6. Myatra SN, Patwa A, Divatia JV. Critical language during an airway emergency: Time to rethink terminology? *Indian J Anaesth* 2020;64:275-9.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick response code	Website: www.ijaweb.org
	DOI: 10.4103/ija.ija_356_21

How to cite this article: Ravi M, Shivashankar A, Geetha CR, Tejesh CA. Unanticipated failed intubation inspite of good laryngeal view on direct laryngoscopy. *Indian J Anaesth* 2021;65:839-40.

© 2021 Indian Journal of Anaesthesia | Published by Wolters Kluwer - Medknow