Preoperative Bronchoscopy before Lung Isolation: Look before You Leap

The Editor,
A 62-year-old man having a carcinoid tumor involving the left main bronchus planned for a left-sided pneumonectomy. The tumor was arising from the left main bronchus approximately 1 cm from carina. Lung perfusion scan of this patient showed 94.3% perfusion on the right side with upper, middle, and lower lobes contributing 17.5%, 49.2%, and 27.7%, respectively. The left lung contributed to only 5.7% of perfusion. The predicted postoperative forced expiratory volume in the 1st s after a left pneumonectomy was 1.74 L.

After placement of a thoracic epidural catheter and attachment of standard American society of Anesthesiologists monitoring, the patient was preoxygenated, and anesthesia was induced with intravenous propofol, fentanyl, and rocuronium. A right-sided 37 F double-lumen tube (DLT) was inserted under direct laryngoscopy. The position of the DLT was then confirmed by conventional auscultation method and using a pediatric fiberoptic bronchoscope. On auscultation, there was no air entry on the left side and also in the right upper lobe area. On fiberoptic bronchoscopic confirmation, DLT was placed in the right main bronchus which bifurcates into middle and lower lobe bronchi. The right upper lobe bronchus was arising directly from the trachea with a view of carinal trifurcation [Figure 1].

The presence of a congenital anomaly of the central airway can be of great significance to anesthesiologist. The most common anomaly is a tracheal bronchus that supplies the right upper lobe and which is reported to be present in 0.1%–5% of the population. Three different types (Type I–III) of anomalies have been described with respect to tracheal bronchus. Type III variety with carinal trifurcation presents the maximum challenges when anesthesia with one lung ventilation is contemplated. The anatomical variation prevents the use of DLT for one-lung ventilation.

In our case, the correct placement of DLT was not possible because right upper lobe was not getting ventilated. A bronchial blocker on the left side was also not possible as the mass was too close to the carina in the left main bronchus. We successfully and uneventfully conducted the case after removal of the DLT and reintubating with 8 mm single lumen cuffed endotracheal tube and using low tidal volume ventilation. The soiling of the right lung was prevented by repeated suctioning of the airway, and an attempt was made to clamp the left main bronchus as early as possible.

Our purpose of reporting this case was to highlight the importance of seeing the preoperative bronchoscopy or reconstructing the virtual bronchoscopy images from the preoperative computed tomography scan if the software is available, before planning one lung anesthesia. This can definitely help in the better planning of anesthetic management in such cases.

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.

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Conflicts of interest
There are no conflicts of interest.

Jeson R Doctor, Sohan Lal Solanki, Savi J Kapila
Department of Anesthesiology, Critical Care and Pain, Tata Memorial Centre, Homi Bhabha National Institute, Mumbai, Maharashtra, India

Address for correspondence: Dr. Jeson R Doctor, Department of Anesthesiology, Critical Care and Pain, Tata Memorial Centre, Dr. E. Borges Marg, Parel, Mumbai - 400 012, Maharashtra, India. E-mail: jesonrdoctor@gmail.com

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Sir,

Early extubation failure following tracheal resection and reconstruction (TRR) is mostly due to tracheal edema, suture line dehiscence, wound hematoma, or delayed recovery from anesthesia. Here, we like to report extubation failure due to entrapment of tracheal tube (TT) by surgical sutures and its successful management in a patient who underwent TRR.

Thirty-three-year-old, ASA 1, female patient was diagnosed as a case of post extubation tracheal stenosis and had a tracheostomy to relieve the proximal tracheal obstruction. She had an alleged history of organophosphate poisoning which resulted in respiratory failure and was mechanically ventilated for two weeks. Preoperative fiberoptic bronchoscopic (FOB) examination showed complete tracheal stenosis at the level of fourth tracheal ring at about 3.5 cm distal to the vocal cords with normal mobility of vocal cords. On the scheduled day of surgery, under standard monitoring after intravenous induction, tracheostomy tube was exchanged to 6 mm internal diameter armored cuffed TT and controlled ventilation was started. Another polyvinyl chloride (PVC) TT was inserted through the oral cavity across the glottis into the blind end of stenosed part of proximal trachea. After the resection of the diseased trachea, the posterior half of proximal part of trachea was anastomosed with corresponding distal part with 2-0 vicryl interrupted sutures. To facilitate the anterior anastomosis, the armored TT was pulled out and the proximally placed PVC TT was advanced under surgeon’s direct vision and guidance into the distal trachea till the cuff of tracheal tube was kept just below to the suture line and bilateral air entry was confirmed by chest auscultation. Anterior tracheal anastomosis was completed similar to posterior anastomosis and the neck wound was closed in layers.

After meeting extubation criteria, on attempted extubation after complete cuff deflation, the TT was found to be tightly held inside the trachea. Further attempts of extubation were abandoned and FOB was done to find out the cause for this unexpected event. We found a purple structure around the circumference of the tracheal tube region [Figure 1]. As vicryl, a delayed absorbable purple colored suture was used for anastomosis, there was little doubt regarding what must have happened. Re-exploration was done and three anterior sutures were released. After that the TT was found easily moving inside the trachea and anastomosis was completed. She was extubated subsequently and further course in the hospital was uneventful. One of the anterior tracheal suture had formed a tight loop around the tracheal tube during the passages of the tube into the distal trachea. It seems quite obvious that more the number of sutures by the side

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