When everything failed, glidescope prevailed

Sir,

We report the successful management of an unanticipated difficult airway secondary to an asymptomatic large vallecular cyst obscuring the glottic opening using glidescope after repeated failed attempts at mask ventilation and laryngoscopy.

A 70-year-old, 60 kg, American Society of Anesthesiologists (ASA) I male patient was scheduled to undergo re-exploration for persistent bleeding following transurethral resection of the prostate. The preanesthetic checkup and airway examination was unremarkable. General Anesthesia was planned in view of ongoing blood loss. Patient was shifted to the operating room and connected to the multichannel monitor (Datex-Ohmeda, Finland). Intravenous access (i.v.) was established with 18G cannula, and i.v. glycopyrrolate 0.2 mg and morphine 6 mg was given. Patient was preoxygenated with 100% oxygen for 3 min and then induced with sleep dose of thiopentone. After confirming assisted mask ventilation, i.v. vecuronium (0.1 mg/kg) was given but, immediately after full muscle relaxation was achieved, absent capnography trace along with minimal movement of the chest was noticed. Guedel’s airway was inserted, mask position and adequate seal reconfirmed and any leaks or equipment failure was ruled out. With failure to ventilate even now, it was decided to perform direct laryngoscopy to facilitate endotracheal intubation. Meanwhile, the anesthesia technician was also requested to bring a glidescope as the fiberoptic bronchoscope was not available. Since the patient was routinely preoxygenated with 100% oxygen, the SpO₂ could be maintained at around 93% throughout till successful intubation could be accomplished. A large vallecular cyst was detected arising from the right vallecula obscuring the glottic opening entirely [Figure 1]. After two unsuccessful attempts to visualize the glottis, it was decided to use glidescope which revealed a small aperture glottic opening, distorted and displaced by the cyst. 7.0 mm cuffed oral endotracheal tube was passed beyond the cyst into the trachea and confirmed by capnogram. The cyst was then aspirated to prevent any problems at extubation. Patient was maintained on controlled ventilation using 66% nitrous oxide in oxygen with 1% isoflurane. He also received i.v 8 mg of dexamethasone following intubation. The surgery continued uneventfully for 1 h. At the end of surgery, neuromuscular blockade was reversed with 50 μg/kg of i.v neostigmine and 10 μg/kg of i.v glycopyrrolate. His trachea was extubated uneventfully. He was then shifted to postanesthesia care unit and discharged from the ward 2 days later.

Glidescope is a new addition to the armamentarium for managing a difficult airway. Although it has been used to achieve primary airway control in anticipated, symptomatic large vallecular cyst,[1] it also helps in unanticipated difficult airway by improving the Cormack-Lehane grading and making part of the airway visible. By virtue of its inherent design of bent tip at 60°, the structures that are obscured on direct laryngoscope may be readily observed with the use of glidescope.[2,3] It is already established that the use of glidescope has a high success rate in both primary airway control as well as failed direct laryngoscopy.[4] The ASA difficult airway guidelines have also incorporated glidescope for improved laryngeal view and increased successful intubations.[5]

This equipment use avoids multiple attempts at successful tracheal intubation. Therefore, it may be used as a tangible alternative device in a situation where tracheal placement seems to be rather difficult or impossible.

Richa Saroa, Sukanya Mitra, Shradha Sinha, Anjali Singh

Department of Anaesthesiology and Critical Care, Government Medical College and Hospital, Chandigarh, India

Address for correspondence: Dr. Richa Saroa, Department of Anaesthesiology and Critical Care, Government Medical College and Hospital, Chandigarh - 160 030, India. E-mail: richajayant@rediffmail.com

References

1. Choi GS, Park SI, Lee EH, Yoon SH. Awake Glidescope® intubation in a patient with a huge and fixed supraglottic mass — A case report. Korean J Anesthesiol 2010;59 Suppl:S26-9.
2. Cooper RM, Pacey JA, Bishop MJ, McCluskey SA. Early clinical experience with a new videolaryngoscope (GlideScope) in 728 patients. Can J Anaesth 2005;52:191-8.
3. Benjamin FJ, Boon D, French RA. An evaluation of the GlideScope, a new video laryngoscope for difficult airways: A manikin study. Eur J Anaesthesiol 2006;23:517-21.
4. Aziz MF, Healy D, Kheterpal S, Fu RF, Dillman D, Brambrink AM.
Routine clinical practice effectiveness of the Glidescope in difficult airway management: An analysis of 2,004 Glidescope intubations, complications, and failures from two institutions. Anesthesiology 2011;114:34-41.

5. Practical guidelines for management of difficult airway — An updated report by the American Society of Anesthesiologists Task Force Management. Anesthesiology 2013;118:251-70.

Sir,

Peripheral venous cut-down, once a mainstay in the care of critically ill patients has lost favor since the introduction of Seldinger technique of central venous line placement. However, this technique is often used when percutaneous vascular access is difficult, or there is an unacceptable time delay.[1] Although uncommon, complications reported are bleeding, thromboembolism, phlebitis, hematoma formation, and nerve injury.[1]

Thirty two years (45 kg, 150 cm) female patient presented to gynecology emergency in shock on postpartum day 1. Venous access was difficult, and only a 20G venflon could be secured. Patient was intubated in view of the poor respiratory effort. Blood pressure was not recordable. Peripheral venous cutdown was performed through a right cephalic vein using infant feeding tube (10F, Romsons Science and Surgical India Private Limited). Ringer lactate was given for resuscitation. As blood pressure continued to stay unrecordable at central venous pressure of 14 cm of H2O, dopamine 10 $\mu$gm/kg/minute was started.

Physical examination was negative for active bleeding. Patient was shifted to intensive care unit (ICU). 24 h after arrival into ICU, patient became febrile. Swelling appeared on the left side of the neck along with redness of the overlying skin. Computed tomography scan of the neck showed hypointense lesion with poor rim enhancement [Figure 1]. Diagnosis of submandibular abscess was made, and patient taken for excision and drainage of the abscess. Exploration of neck revealed perforation of the anterior jugular vein by the tip of infant feeding tube resulting in extravasation of fluid and accumulation of same in tissues of neck. Drainage of fluid was done, and infant feeding tube removed. Trachea was extubated 2 days later.

Positioning of the catheter tip in the right subclavian vein was confirmed in the initial chest X-ray. Later on semi-rigid catheter tip could have migrated, abutted the vessel wall and created mechanical irritation resulting in perforation. As infant feeding tube contains a thin radio opaque line, displacement of the catheter was probably missed on the subsequent chest X-ray taken in the ICU.

Central venous catheter malposition into the anterior jugular venous system (AJVS) usually occurs when the catheter enters the horizontal component of the AJVS that is, jugular venous arch by the external jugular vein, which is the most common origin of the horizontal aspect of AJVS.[2]

Use of infant feeding tubes made of polyvinyl chloride in lieu of relatively expensive polyurethane or silicon catheters is still practiced in developing nations. In contrast to the silicon catheters, the infant feeding tubes are stiffer, increasing the propensity of vessel erosion, as was seen in our case. In addition to perforation of the vessel wall, PVC is highly thrombogenic and promotes the growth of fungus.[3,4]

Therefore, to avoid such complications in future the use of infant feeding tubes for percutaneous central venous cannulations should be strongly discouraged and if used utmost care should be taken to confirm the proper placement and prompt intervention should be taken in case of malpositioning.

Jeetinder Kaur Makkar, Divya Jain, Kajal Jain, Rajeev Subramanyam
Department of Anaesthesia and Intensive Care,
Postgraduate Institute of Medical Education and Research,
Chandigarh-160 012, India

Figure 1: CT scan of the neck showing hypointense lesion with poor rim enhancement