

Cervical plexus block as an adjunct to general anaesthesia for tracheal resection and anastomosis

Dear Editor,

We present the successful utilisation of intermediate cervical plexus block and bronchoscopic-aided ventilation to evaluate the extent of intraluminal tracheal tumour for a 56-year-old female with American Society of Anesthesiologists (ASA) physical status II, who was undergoing tracheal resection and anastomosis. The patient complained of cough, shortness of breath and occasional haemoptysis, which was insidious at the onset. The patient had undergone total thyroidectomy for papillary thyroid cancer 1.5 years back and was on

oral thyroxine 125 µg daily. Contrast magnetic resonance imaging of the neck showed a well-defined, T1/T2-isointense lesion of size 27 mm × 23 mm × 22 mm, arising from the anterior tracheal wall, with both endophytic and exophytic components at the level of C5–C6 vertebra, causing near-complete occlusion of the tracheal lumen at this level with homogenous postcontrast enhancement, which is likely a remnant of thyroid tissue [Figure 1]. The patient was scheduled for tracheal exposure under the cervical block, rigid bronchoscopy, resection and tracheal anastomosis. On the operative day, ASA standard monitors were attached to the patient with room air saturation of 90%. Under all aseptic precautions, an ultrasound-guided, bilateral, intermediate cervical plexus block was performed, with 10 ml of 0.5% bupivacaine and 5 ml of 2% lignocaine on each side (total 30 ml).

The tracheostomy plane was dissected under the cervical plexus block in spontaneous

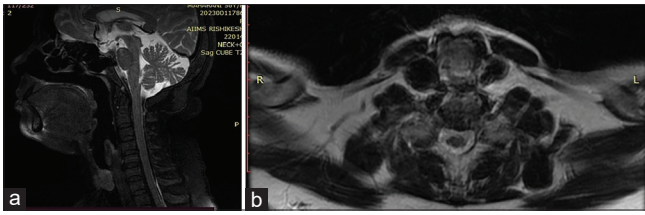


Figure 1: CE-MRI neck showing growth in the trachea at the C5–C6 level with near-total occluding tracheal lumen. (a) Sagittal section of contrast MRI showing growth in the lower end of the trachea. (b) Axial section of contrast MRI showing growth at the level of C5–C6 vertebra, causing near-complete occlusion of the tracheal lumen. CE-MRI = contrast-enhanced magnetic resonance imaging, MRI = magnetic resonance imaging

ventilation [Figure 2]. Growth was noticed around the anterior wall's third and fourth tracheal rings. A rigid bronchoscope with a ventilating port was inserted with moderate sedation with fentanyl 30 µg and midazolam 0.5 mg intravenously (IV). A growth infiltrating the anterior tracheal wall was seen; the posterior wall was free from tumour infiltration. An episode of desaturation (88% oxygen saturation for 1 min) happened during rigid bronchoscopy, which was managed with 100% oxygen through the bronchoscope. After checking the extent of intraluminal extension of growth, a tracheostomy was done with a flexometallic tube of size 6.5 mm. Anaesthesia was induced with sevoflurane in oxygen (50%), fentanyl 100 µg and vecuronium 5 mg IV. Intraoperative hypotension (blood pressure of 80/50 mmHg) was initially managed with crystalloid fluids (500 ml) and mephentermine 6 mg IV. The anterior wall of five tracheal rings involving the tube was resected. The tracheal segment was removed circumferentially, preserving the blood supply of the cricoid and lower tracheal segments. After removing the involved tracheal segments, nasal intubation was done with a flexometallic tube sized 7 mm, and the lower end of this tube was kept in the subglottic region under direct visualisation of the surgically exposed trachea. The tracheal tube was removed, and a nasal endotracheal tube was introduced into the trachea. The lungs were ventilated through it when anastomosis of the posterior part of the trachea was done. After 12 h of elective mechanical ventilation, the patient was extubated and kept on spontaneous ventilation with guarding sutures, which continued postoperatively for the sixth day and were removed on the seventh postoperative day.

Numerous alternative anaesthesia techniques have been researched and developed for sensitive airway procedures. A retrospective study investigated the

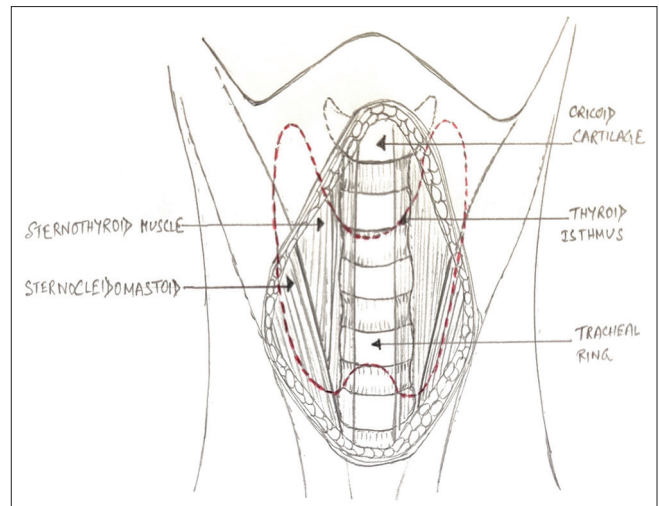


Figure 2: Schematic diagram showing dissection of tracheostomy plane

efficacy of total intravenous anaesthesia (TIVA) using dexmedetomidine and propofol, along with topical anaesthesia supplementation and spontaneous assisted ventilation as an alternative anaesthesia management option for upper and mid-level tracheal restenosis in tracheal resection and anastomosis cases.^[1] Superficial cervical plexus block has been extensively studied, and it has shown encouraging outcomes in elective and urgent airway surgeries.^[2,3]

In our patient, tracheal exposure was chosen as the initial technique for identifying the tracheostomy plane to minimise loss of the vulnerable airway in a controlled environment and dissection of the exophytic tumour under the cervical plexus block with appropriate patient comfort. To conclude, ultrasound-guided intermediate cervical plexus block can be used as an adjunct to general anaesthesia to manage threatened airways safely.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient consented to her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

ORCID

Ruma Thakuria: <https://orcid.org/0000-0001-5963-7549>

Ankita Rawat: <https://orcid.org/0009-003-0713-0975>

Praveen Talawar: <https://orcid.org/0000-0002-9931-2316>

Dhatri Jonna: <https://orcid.org/0009-0001-4337-0445>

***Ruma Thakuria, Ankita Rawat, Praveen Talawar,
Dhatri Jonna***

Department of Anaesthesiology, Pain Medicine and Critical Care, All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India

Address for correspondence:

Dr. Ruma Thakuria,
Department of Anaesthesiology, Pain Medicine and Critical Care, All India Institute of Medical Sciences, Rishikesh - 249 203, Uttarakhand, India.
E-mail: rumathakuria123@gmail.com

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