

Tracheostoma Stenosis: Tracheostoma Revision in a Postlaryngectomy Patient

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Abstract

Tracheostoma stenosis is a late complication in laryngectomy patients. Airway management may prove difficult because of tracheostomy stenosis. We share our experience of a 50 year old female, diagnosed with carcinoma larynx. Patient had undergone total laryngectomy and radiotherapy and surgery for vocal prosthesis 3 months back. Patient had a visible tracheostoma. Patient was having inspiratory stridor, with bilaterally equal entry in both the lungs hence patient was diagnosed as a case of tracheostoma stenosis and was planned for tracheostoma revision surgery under general anaesthesia.

Keywords: Tracheostoma stenosis, post-laryngectomy, revision surgery

Introduction

When a patient with laryngectomy is posted for airway surgery, it may pose a number of challenges to the anaesthetist as well as the surgeon, that is the anatomy of the neck may be altered because of previous surgery and radiotherapy. They both share a common field of work¹. Tracheostoma stenosis is a late complication in laryngectomy patients². Airway management may prove difficult because of tracheostomy stenosis.

Case report

A 50 year old female, operated case of laryngectomy, presented with complaints of difficulty in breathing for 20 days and stridor for 10 days. Patient had undergone total laryngectomy and radiotherapy for CA larynx 6 months back and surgery for vocal prosthesis 3 months back. The patient was a chronic smoker and chronic alcoholic for 30years now. Patient was conscious, oriented to time, place and person with no evidence of pallor, icterus, cyanosis, clubbing, pedal odema and raised JVP. Patient had a visible tracheostoma. Patient was having inspiratory stridor, with bilaterally equal entry in both the lungs, hence patient was diagnosed as a case of tracheostoma stenosis and was planned for tracheostoma revision surgery under general anaesthesia. All routine investigations according to the institutional protocol were done and were found to be within normal limits. An X-ray of head and neck lateral view was done, which didn't reveal any tracheal airway compromise. Patient was given tab. rantac 150 mg and tab. aplrazolam 0.25 mg a night before the surgery. In the operation theatre all the routine monitors (ECG, NIBP, SpO₂, ETCO₂) were attached and i/v line established using a 18 G i/v catheter and fluid started. Patient was planned for awake tracheostoma flexometallic endotracheal tube insertion. Under all

aseptic conditions and after adequate preparation, 2-3 puffs of 10% lignocaine were sprayed over and in the tracheal stoma. Then gradually a 8.0mm flexometallic cuffed endotracheal tube was inserted through the stoma, cuff inflated, bilateral air entry checked and tube fixed. Patient was induced using fentanyl 100 µg, propofol 120 mg and inj.atracrium 25mg i.v. and maintained with 40% oxygen, 60% N₂O and sevoflurane (to achieve MAC of 1). Towards the end of the surgery inj. emset 8 mg was given. As the patient resumed his respiratory efforts at the end of surgery inj. neostigmine 2.5 mg and inj. glycopyrrolate 0.4mg was given. Gradually the patient started responding to verbal commands, maintained good respiratory efforts and 100% saturation. Subsequently he was shifted to recovery room and then shift to ward.

Conclusion

Advance planning, meticulous check-lists for anesthesia equipment, anticipation of possible complications, and good communication as well as coordination between the teams involved, are the key components to design a successful anesthetic plan.

References

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Discussion

- Anesthesia for tracheobronchial surgeries is especially challenging, as anesthesia provider and surgeon share a common area of intervention
- A cuffed flexometallic endotracheal tube was chosen to provide secure airway and reduce the hinderance in the operative field
- Proper fixation of flexometallic tube, regular checking of breathing circuit and close observation during manipulation of the head and neck was ensured all throughout the surgery
- Standby bronchoscopy machine
- Standby post-op ventilator and ICU care