



SAFE TRACHEOSTOMY IN HEAD AND NECK CARCINOMA PATIENTS DURING COVID ERA: METHOD AND DEMOGRAPHICS

Oncology

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ABSTRACT

Introduction: Tracheostomy is inevitable in the management of many head and neck malignancy. The indications vary from supportive to palliative. During Covid-19 era, ensuring surgeon safety while performing tracheostomy is of utmost importance as tracheostomy is considered an aerosol generating procedure.

Materials and methods: All the patients who underwent tracheostomy as part of the management of carcinoma of head and neck region in the department of Surgical Oncology from March till October 2020

Conclusion: Following proper safety measures while doing tracheostomy will ensure safety of the surgeon.

KEYWORDS

Tracheostomy, Covid-19, Head and Neck Malignancy, Safe

INTRODUCTION

Airway maintenance is an integral part in the management of head and neck malignancy. And tracheostomy is one of the most effective way for this. Our aim is to study the demographics of patients who underwent tracheostomy for head and neck malignancies and to describe the technique, and to demonstrate how the operating surgeon safety was ensured during the procedure

MATERIALS AND METHODS

Ethics: We declare that the study conducted was in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration of 1975, as revised in 2000. Institution ethics committee approval was obtained. Informed consent from all the participants was obtained and all the participants was above the age of 7 years. Confidentiality of the participants was ensured throughout the study.

Selection and description of participants

Participants were all the patients who underwent tracheostomy, who were having malignancy in the head and neck region. All patients underwent Covid-19 RT PCR test before the surgery.

Inclusion criterion: Patients with head and neck malignancy who required surgical intervention in whom tracheostomy was to be done.

Exclusion criterion: Patients with proven covid 19 positive result in nasal or oropharyngeal swab RTPCR test and patients less than 12 years of age.

Statistics

40 patients who underwent tracheostomy from the month of March till October 2020 was included in the study. Out of this, 4 (4%) patient were in age group 31 to 40, 15 (37.5%) patients in age of 41 to 50, 7 (17.5%) patients in age of 51 to 60, 11 (27.5%) patients in age of 61 to 70, 2 (5%) patients in age 71 to 80 yrs and 1 (2.5%) patient was in age of 81 to 90 years. 30 (75%) patients were males and 10 (25%) patients were females. All patients included in the study were tested Covid negative before surgery by nasal or oropharyngeal swab RTPCR test. None of the patient developed any symptoms suggestive of Covid after the procedure. 9 (22.5%) patients were carcinoma larynx, 12 (30%) patients were having ca tongue, 5 (12.5%) patients were having carcinoma buccal mucosa, 11 (27.5%) patients were having carcinoma lower alveolus, 1 (2.5%) patient had carcinoma thyroid. 1 (2.5%) patient had carcinoma lip, 1 (2.5%) patient had carcinoma salivary gland. 7 (17.5%) patients underwent tracheostomy as part of diagnostic procedure including biopsy. 33 (82.5%) patients underwent tracheostomy as part of curative or palliative procedure. Out of the total procedures, 1 (2.5%) was performed as emergency and rest 39 (97.5%) was performed as elective procedure. In all the cases, procedure was done using the surgical helmet and hood (powered respirators) as recommended by the New York Head and Neck Society.

All the procedure was performed under local anesthesia. All elective tracheostomies were done using a Bjork flap (97.5%) and in emergency bjork flap was not used (2.5%).

DISCUSSION

Tracheostomy is often has an inevitable part in the treatment of malignancies of head and neck region. The decision to proceed with tracheostomy depends on the primary disease morphology, disease presentation, the resection and reconstruction procedure planned, and as part of palliative procedure also. Often the patient of oral cavity malignancy presents with reduced mouth opening, which makes oral or nasal intubation difficult for providing general anesthesia; and tracheostomy can aid in securing airway. It is also indicated, when the resection involves removing the central arch of mandible, thus removing the anterior attachment of the tongue which can make tongue fall and airway obstruction. Resection procedures which interferes the normal deglutition anatomy also can lead to aspiration of the oral secretions and tracheostomy is indicated in these cases. Tracheostomy is also indicated in total laryngectomy cases. In our study, keeping in mind about the Covid 19 pandemic, all the patients had undergone RTPCR of the nasal or oropharyngeal swab. Tracheostomy is considered as an aerosol generating procedure and carries the risk of transmission of acute respiratory infection to the surgeon. All the procedure was done with the surgeon wearing a surgical helmet with battery operated ventilation and sterile hood over the helmet (powered respirators). Patients were positioned supine with slight neck extension. Neck was painted with betadine solution and sterile draping was done. Local anesthetic infiltration was done with lignocaine solution. Vertical or horizontal incision was made below the cricoid cartilage in accordance with the curative surgery planned. Strap muscles were retracted from midline. Cricoid was pulled up with a cricoid hook and trachea was confirmed with aspiration of air into a saline filled syringe. At this point, muscle relaxants were given and bjork flap was created in elective cases and secured to skin with silk sutures. and trachea was intubated and cuff inflated. After assessing adequate air entry in both lung, tube was secured in place with fixation sutures.

None of the surgeons who performed the procedure became Covid positive at the end of the study, nor did develop any respiratory symptoms. We have noticed that the operating surgeon was completely protected from the blood splashes, which is often inevitable during local anesthesia tracheostomies. This ensures that the surgeon is protected from any blood bourn or airway transmissible infections. It is imperative that the safety of the surgeon also safeguarded during the procedure.

CONCLUSION

Tracheostomy is an efficient way of securing airway in the management of head and neck malignancy. It may be done as a part of palliative or curative surgery, in an elective or an emergency setting.

Ensuring the safety of the surgeon is of utmost importance during the procedure, especially during the Covid times.

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