

Anesthetic Concerns in a Patient with Carcinoma Cheek with Absolute Trismus (Zero Mouth Opening) in a 60 Year Old Lady Posted for Wide Excision of Cheek with Hemi Mandibulectomy and Radical Neck Dissection with Myocutaneous Flap Cover

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Abstract: Carcinoma cheek is a common malignancy in our country and is associated with tobacco, paan and gutka chewing. The patients are usually malnourished and anesthesiologist faces multiple problems before subjecting them to anesthesia, during the operating procedure and in the postoperative period. Trismus and inability to open the mouth is seen in many cases of carcinoma cheek and carries definitive risk in securing stable and adequate airway. The preoperative preparation, the intricacies involved in facilitating nasotracheal intubation and the measures needed to maintain an unobstructed airway in the postoperative period are discussed.

Keywords: Carcinoma cheek, trismus, blind nasal intubation, hemi mandibulectomy, myocutaneous flap cover, deltopectoral flap

1. Introduction

Patients with carcinoma cheek pose many problems to the anesthetist. Their oral hygiene is very poor and the patients are prone for upper respiratory infections. There is also some bleeding into the oral cavity along with saliva and mucus due to trivial trauma to the ulcer area and badly inflamed gums and dentition. They may also have edema of the upper airway. The nasal pathways are also congested, inflamed and hyperemic due to the associated inflammation. The patients are also likely to have anemia and hypoproteinemia.

2. Pre-anesthetic preparation

Pre-operative decongestant nasal drops and antiseptic mouth gargles are a must in such cases and they were started 3 days prior to surgery. The mouth gargling was done with chlorhexidine and was given four times a day to sanitize the mouth and reduce halitosis. Xylometazoline and sorbitol nasal drops were also started three days prior to surgery and were instilled four times a day. This was done to decongest the nose and reduce the risk of epistaxis during nasotracheal intubation. The patient was evaluated with a surgical profile (CBP, blood sugars, blood urea, serum creatinine, X-Ray chest, ECG, HBsAg, HIV, HCV, serum electrolytes and serum proteins) and except for anemia(10.5gm%) all the other investigations were found to be normal and within acceptable limits.

3. Anesthetic Technique

The patient was brought to the OT, a peripheral 18G iv line was started on the left upper limb, ECG, NIBP, SPO2 and ETCO2 monitors were selected for the surgery. Injection glycopyrrolate 0.2mg iv, injection pantoprazole 40mg iv, dexamethasone 8mg iv and ondansetron 4mg iv were given. Nasal drops were repeated. The appropriate nostril selected and packed with a small ribbon gauze soaked in 2% lignocaine with 1:200000 adrenaline. The patient was given 5ml of 2% lignocaine viscous and asked her to rinse the oral cavity and then asked to spit out viscous to minimize the gag reflex during awake nasal intubation. Bilateral superior laryngeal nerve block and transtracheal block were given to anesthetize the larynx and trachea. We selected a technique of awake blind nasal intubation and a 5.5mm uncuffed pre moulded red rubber tube was used and introduced through the nostril. Hearing the breath sounds continuously, the ETT was negotiated into the trachea in the first attempt and its position confirmed by reservoir bag movements and ETCO2. The patient was induced with propofol, O2 and sevoflurane and taken deep in spontaneous and assisted respiration. At this stage, a tube exchanger(bougie) was passed through the 5.5mm uncuffed tube, tube removed after keeping the bougie in-situ and over the bougie a 6.5mm cuffed armoured tube was threaded and fixed to the nose, and also anchored by a suture to the nose at the appropriate position. The eyes were protected with a barrier ointment to prevent drying of eyes. Throat packing was not possible in view of the zero mouth opening.

Anesthesia was continued with 100micrograms fentanyl, O₂, N₂O, sevoflurane and atracurium. A second iv line 16G was started in the other limb to cope up with blood losses and volume replacement.

The surgery was wide excision of the cheek hemi mandibulectomy including removal of condyle and ramus and coronoid process of mandible and radical neck dissection with deltopectoral myocutaneous flap. The surgery lasted 5 hours and was uneventful. At the end of surgery, before reversal a ryles tube was guided through the other nostril and fixed for postoperative enteral nutrition. Patient reversed with glycopyrrolate and neostigmine. Injection ketorolac 60 mg and injection diclofenac 75mg im were given at the end of surgery to facilitate postoperative analgesia. The patient was assessed on the nasotracheal tube for the next one hour in spontaneous breath and as the recovery was satisfactory, extubated over a bougie and the bougie fixed like an ETT at 20cm mark and brought out through the hole cut in the poly mask used for administration of O₂ on the patients face. The bougie was subsequently removed after 4 hours. A tongue tie was placed and the thread anchored to the chin by a small strip of plaster to prevent tongue from falling back. Nasal drops and dexamethasone were continued along with NSAIDS for next 72 hours. The postoperative period was uneventful and the patient was discharged on the 21st postoperative day for subsequent radio and chemotherapy.



Image showing nasal intubation at the end of surgery

Discussion

Carcinoma cheek requires an elaborate meticulous preparation of the nasal cavity and oral cavity with nasal decongestants and oral mouth rinses to improve the aesthetics of intubation. Correction of anemia and hypoproteinemia should be steadfastly ensured to improve the surgical outcome and wound healing. Using a smaller sized ET tube, especially a red rubber uncuffed tube has a lot of relevance and ensures a smooth awake and acceptable intubation, as the surface of red rubber tube is smooth and soft.

Taking the patient deep in spontaneous respiration with sevoflurane avoids the hassle of introducing an armoured tube over a bougie in a conscious condition. Accidental displacement of the ET tube is a catastrophe, it should be avoided at all costs by proper anchoring and suturing of the tube to the nose, simply because of the fact that a laryngoscopic intubation in the middle of surgery is not feasible in view of the closed mouth.

Narcotics and deep sedation should be avoided in the post-operative period as they can compromise the upper airway. NSAIDS have a role in post-operative analgesia and along with dexamethasone also reduces airway edema. Dexamethasone should not be used for more than 2 or 3 days in view of its effect on wound healing.

It is a perfectly safe practice to continue nasal decongestant drops for at least 30 days after surgery to ensure proper nasal breathing.

All efforts to maintain upper airway should be instituted. This may require the use of a tongue stitch, nasopharyngeal airway, tube exchanger through the nose or at times even a nasotracheal tube for atleast 24-48 hours after the surgery.

If there is any doubt about the integrity of the airway and the risk of airway and neck edema, one should not hesitate to consider the option of an elective tracheostomy till the radiotherapy and chemotherapy options are completed. After a deltopectoral flap, the patient may have to be nursed with a flexed neck till the flap is divided and the patient should be counselled about this possibility before contemplating surgery.

Abbreviations

CBP-complete blood picture
ECG-electrocardiogram
HBsAg-hepatitis B surface antigen
HCV-hepatitis C virus
OT-operation theatre
G-gauge
NIBP-non invasive blood pressure
SPO₂-peripheral capillary oxygen saturation
ETT-endotracheal tube
O₂-oxygen
N₂O-nitrous oxide
iv-intravenous
im-intramuscular
NSAIDS-nonsteroidal anti-inflammatory drugs

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