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A POST MAXILLECTOMY CASE POSTED FOR ETHMOIDAL AND FRONTAL MUCOCELE DRAINAGE: A DIFFICULT AIRWAY

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Abstract

Difficult airway management is itself a test of skills and techniques of an anaesthesiologist. Managing a difficult airway is a most challenging task. Out of all the specialities it is encountered most of the times in ENT surgeries. Large tumours, extending to the airway and larynx, neck rigidity, trauma, short neck and obesity associated with thyroid disorders, all these factors attribute to difficulty in securing airway in terminally ill patients. In this case report, we present a case of 61 year old female, who has undergone maxillectomy and is now posted for endoscopic sinus surgery. This patient's left cheek was hollow and was a case of difficult bag and mask ventilation. Here, apart from airway management, we have given more significance to the technique of bag and mask ventilation. Thereby, every physician who needs to perform intubation has to be familiar with the evaluation of the difficult airway and must also be able to use different tools and techniques available to manage a difficult airway, thus preventing morbidity and mortality.

Key words: difficult airway, paranasal sinuses, bag and mask ventilation.

Introduction:

There are four paired paranasal sinuses. Ethmoidal sinuses or ethmoidal air cells are one of the paranasal sinuses. Acute ethmoiditis and ethmoidal carcinoma in children, may spread superiorly or laterally, thereby causing meningitis, cerebrospinal fluid leakage and proptosis with diplopia respectively [1]. Thus, this was a patient of ethmoidal adenocarcinoma and was treated radically with left maxillectomy and ethmoidectomy. Now this patient presents with frontal and ethmoidal mucocele and is posted for endoscopic drainage.

Case report:

A 61 –year-old female weighing 52 kg, presented with headache and tenderness in left medial canthi. There was also emptyness in left cheek as in Fig 1 and Fig 2, and the patient gives history of left maxillectomy and ethmoidectomy 12years ago. Also, the patient has received six cycles of chemotherapy and radiotherapy. The patient is also a known hypertensive since two years on medication.On examination, there was tenderness in left supraorbital ridge and left medial canthi. Also there was hollowness in left cheek, mallampati class III, thyromental distance-6 cm with inadequate mouth opening indicated anticipated difficult mask ventilation and intubation.(FIG-1,2). Thereby, a difficult airway cart was kept ready containing laryngeal mask airway of size 3, McIntosh blade size 3 and 4 and bougie [2].

Fig 1, Left post maxillectomy

Fig 2, anticipated difficult mask ventilation

Fig- 3, left nasal tumour.

Our main aim was to achieve adequate mask ventilation. In case of failed mask ventilation, we planned to do awake fibreoptic intubation using local blocks through oral route and moreover we kept informed ENT surgeon as there was remote possibility of tracheostomy. The patient was premedicated with injection glycopyrolate 0.005mg/kg and fentanyl 2mcg/kg. As adequate mask ventilation was not possible due to hollowness of left cheek, there occurred leak. So we followed a technique to cover the leak and fill the reservoir bag. We folded the cotton pads, cut it into the shape of hollow space in cheek, we stuck these cotton pads to the size 3 face mask and held the face mask over the patients face. But, we still failed to achieve adequate seal. Thereby, we planned to hold the mask by two hands and the other person was giving positive pressure ventilation through bag, which made us achieve adequate bag filling successfully. The patient was induced with propofol 2mg/kg. Mask ventilation was

possible only with two persons holding the mask. We were able to mask ventilate with adequate chest expansion. Then we decided to perform a trial laryngoscopy to assess the ease of intubation. McIntosh laryngoscope with no. 3 blade was used through, which we could visualize only epiglottis with CL grading of IIIa. As mask ventilation was achieved with two persons adequately, we decided to give succinylcholine 2mg/kg in order to facilitate the better visualization of the glottis on direct laryngoscopy. As there was no improvement in CL grading following relaxation and with McIntosh blade, we decided to introduce the bougie and thread the tube over it and the same was accomplished with single attempt.

Discussion:

Our main motive in this case was to achieve adequate mask ventilation in order to secure airway. A case of post maxillectomy with impossible conventional mask ventilation in a 61year old female patient was successfully managed by ventilation with face mask no. 3, properly sealing the leak with use of cotton pad and also by taking the help of other person to bag as we had to hold mask with two hands. We checked the inadequacy of mask ventilation in awake patient by lack of filling of reservoir bags even with high flows. After confirming adequate ventilation, patient was induced and trial laryngoscopy revealed CL grade IIIa. Succinylcholine did not improve CL grading; hence, we intubated by threading endotracheal tube over bougie.There is another case report of fibrodysplasia of maxilla: A difficult airway. It was a case of a big nasal tumour with impossible conventional mask ventilation in a 14-year-old boy as shown in fig 3 was successfully managed by ventilation with paediatric face mask (no. 2) covering the mouth only [3].In our case, primary worry was mask ventilation though difficult intubation was also anticipated.

Conclusion:

Difficult airway and difficult mask ventilation is a nightmare to an anaesthesiologist if the airway is not successfully secured. Ironically, the airway assessment may reveal easy intubation, but mask ventilation may be difficult in some rare cases. This is such a case where no advanced intubating device was used to secure airway, but an innovative method to mask ventilate the patient was employed. Thereby, this case shows the significance and need for prior planning of difficult mask ventilation.

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