



Intubation in Mallampatti Classification IV Patient Using Video Laryngoscope

KEYWORDS

difficult intubation, videolaryngoscopy, kingsvision videolaryngoscope, burn contracture, modified radical mastectomy

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ABSTRACT Background-As we all know intubation is a difficult procedure in reduced mouth opening patients and if airway not secured properly may lead to difficulty in ventilation, inability to ventilate in cases have been responsible for intra op death.

Case summary-We report a case of left sided carcinoma of breast with reduced mouth opening due to previous burn contracture posted for left sided modified radical mastectomy with anticipated difficult intubation. Videolaryngoscope is used to intubate this patient over other techniques.

Conclusion-The videolaryngoscopy technique is a valuable option in places where fiber optic bronchoscope is not readily available or affordable for gaining airway access for surgery in cases with anticipated difficult airway.

Introduction

The major responsibility of the anaesthesiologist is to secure the airway and provide adequate ventilation to the anaesthetised patient.(1) As we all know intubation is a difficult procedure in reduced mouth opening patients and if airway not secured properly may lead to difficulty in ventilation. Inability to ventilate in cases has been responsible for as many as 30% of total deaths attributable to anaesthesia.(2)

We report a case of left sided carcinoma of breast with inability to open mouth due to previous burn contracture posted for left sided modified radical mastectomy with anticipated difficult intubation.

Case report

A 38 yr old female farmer resident of kolhapur was admitted to our hospital for complaints of lump in left breast for last 7 months.

Patient was apparently normal 7 months back when she noticed the lump which gradually progressed to present cricket ball size.

Patient has a history of burn 4 year back over right side if body (Wallace score - 30%) for which she took treatment for 1 month. The patient had no significant medical history, family history and surgical history.

Personal history is normal with no addictions. Patient was diagnosed of fibroadenoma left breast. It was proven on biopsy and was posted for right sided modified radical mastectomy.

General and systemic examination of the patient was within normal limits.

Local examination showed circular 5*5 cm mobile, tender lump present in left upper quadrant.

Airway examination

- Oral hygiene was present
- Mallampatti classification IV
- All teeth present (lower incisors irregular)
- neck extension and flexion was decreased
- 2 finger mouth opening, angle of mouth deviated to right.
- Temporomandibular distance less than 7 cm
- Trachea centralized
- Both nostrils patent



Figure 1: Airway of the patient

Investigation

Investigations	Patient values
HB	13 gm%
TLC	9,400cumm/dl
PLATELET COUNT	2,85,000lk/dl
HCT	31.3
BSL ®	136mg/dl

Investigations	Patient values
UREA , CREAT	21.0.9mg/dl
SODIUM , POTASSIUM , CHLORIDE	138 , 3.9 , 98mmol/dl
BT , CT PT/INR	2 MIN 30 SEC , 5 , 40 SEC 14 / 1
CHEST X-RAY	WNL
CERVICAL SPINE XRAY (AP & LAT.)	WNL
BLOOD GROUP	O POSITIVE

Management

Informed, written, valid consent was taken after informing the risk involved in surgery and anesthesia. Xylocaine sensitivity test was done (negative). Nil by mouth was advised for 8 hrs. Tab. alprax 1mg at night before surgery was given. 1 pcv was reserved.

I.V line was secured and monitors were attached. Patient was premedicated with Inj. glycopyrrolate 0.2mg iv, Inj. Ondansetron 4mg iv, Inj. Fentanyl 75mcg, Lidocaine 10 % spray was instilled. Oxygen was supplemented with nasal prongs at 5l/min.

Operation theatre was prepared accordingly. After adequate preoxygenation, patient was induced with propofol (120 mg). Head kept in neutral position. Adequate bag and mask ventilation was checked. Patient was intubated with the kingsvision videolaryngoscope with ET NO 6.5 (cuffed) in first attempt with cricoid pressure.



Figure 2,3,4 – intubation via kingsvision videolaryngoscope

After intubation air entry was checked bilaterally (stethoscope and capnography) was equal. Patient was maintained on $O_2 + N_2O +$ sevoflurane & M/R rocuronium. Throughout the procedure patient was hemodynamically stable.

Patient was reversed and extubated at the end of surgery. Postoperatively patient was shifted to PACU for 3 days with adequate analgesia and antibiotic coverage.

Discussion

The anaesthetist plays an important role in the management of post burn patients. (3) the anaesthetist needs to be familiar with the principle of anaesthesia for these post burn patients. These patients show exaggerated hyperkalemic response with succinylcholine due to extrajunctional migration of acetylcholine receptors. So succinylcholine should be avoided for upto 1 year post burn. (3)

We had the option of intubating this patient with either direct laryngoscope or videolaryngoscope or blind nasal intubation or retrograde intubation or fiberoptic intubation. Blind nasal intubation was avoided as it is traumatic, may cause sudden laryngospasm in this patient which is already a case of anticipated difficult intubation and its failure is very common (4,5). Retrograde intubation was avoided because it is too invasive and takes too much time. We didn't had the option of fiberoptic intubation due to lack of instrument. Many studies have shown that videolaryngoscope provide better view of the glottis when compared with conventional direct laryngoscopy. (6-8) Further more since the shape of the blade of kingsvision videolaryngoscope is similar to the primary curve of oropharynx it is easier to intubate the patient in neutral position as compared to direct laryngoscopy.

Conclusion

Death from loss of airway still occurs in patients with difficult airway. Videolaryngoscopy is a better way to intubate a patient with anticipated difficult airway than traditional laryngoscope. Anticipated difficult airway cases can be easily done with it (in absence of FOB). Intubation becomes easy because of better visualization of the glottis with videolaryngoscope, as it provides a wider viewing angle of 60 degree as compared to 10 degree of the direct laryngoscope. Thus trauma to the airway can be reduced .

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