Case Report

Airway Management Using McGrath MAC Videolaryngoscope in a Patient with Predicted Difficult Airway

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Abstract

Difficult airway may be defined as a situation in which conventionally trained anesthetist has a difficulty in either mask ventilation, or endotracheal intubation, or both. Several management tools are available of difficult airway and one such tool is a videolaryngoscope. We are presenting a case report demonstrating the use of McGrath MAC videolaryngoscope in a patient with long standing neck swelling and restricted neck extension.

Keywords: Predicted difficult airway, endotracheal intubation, video laryngoscope

Introduction

Videolaryngoscopes are said to be a new addition to the anesthetist's armamentarium for management of airway in patients whose airways are predicted to be difficult during the preoperative airway assessment.[1,2] Videolaryngoscopes are a paradigm shift in glottic visualization, which in few studies have shown to need less cervical extension during endotracheal intubation.[3] We experienced the same advantage in one such case with restricted neck extension and mallampatti score of 3.

Case Report

A 65-year-old ASAII male patient presented with a non-thyroid neck swelling of more than 10 year duration for excision biopsy [Figure 1]. Patient was a known hypertensive on regular treatment. On examination, pulse rate was 74 beats per minute and blood pressure was 140/90 mm of Hg. Airway assessment revealed a neck extension of 10 degrees. Neck flexion was restricted due to the presence of swelling. Mallampatti was grade 3 and mouth opening was adequate. Hemoglobin was 14 gm/dl, random blood sugar was 148 mg/dl. General anesthesia with endotracheal intubation was requested for the excision of the neck swelling. A McGrath MAC videolaryngoscope was chosen for intubation in view of restricted neck movements. Backup plan was to insert laryngeal mask airway in case orotracheal intubation failed.

Patient was kept nil orally overnight and asked to continue anti-hypertensive medication of tablet Amlodipine 5 mg PO. Consent was obtained and airway and emergency cart was kept ready. Peripheral intravenous line was secured in the left upper limb. Pulsoximeter, non-invasive blood pressure, electrocardiogram, and $ETCO_2$ monitors were attached.

Patient was premedicated with Inj. Glycopyrrolate 0.2 mg, Inj. Midazolam 1 mg and Inj. Pentazocine 20 mg intravenously. Induction was done with Inj. Propofol 100 mg and Inj. scoline 100 mg was given IV after effective bag mask ventilation was confirmed. Inj. Xylocard 2 mg/kg was used to suppress hemodynamic response to intubation. McGrath [Figure 2] videolaryngoscope with disposable blade no. 4 was inserted in the midline into the oral cavity and advanced to obtain a Cormack and Lehanne grade 1 view. Endotracheal tube no. 8 with a stillete was introduced in the midline and tracheal intubation was done in the first attempt. Time taken for intubation was 18 seconds. Anesthesia was maintained with 50% oxygen and 50% nitrous oxide and 1% Isoflurane with intermittent Inj. Vecuronium used for muscle relaxation. Intraoperative vitals were stable. Patient

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Figure 1: Swelling on the anterolateral part of the neck

was extubated after reversal with Inj. Neostigmine 0.5 mg/kg and Inj. Glycopyrrolate 0.1 mg/kg.

We want to present this case as it demonstrates ease of intubation using McGrath MAC videolaryngoscope in a patient with predicted difficult airway.

Discussion

Incidence of difficult intubation varies from 1.8–3%.[4] Several parameters are considered during airway assessment to predict difficult airway. Mallampatti grade uses extent of visualization of pharyngeal structures on complete mouth opening to predict difficult airway.[5]. Likewise restriction of head extension also can cause difficulty in intubation due to the inability to place the patient in optimal sniffing position. Hence, a decision was made to use videolaryngoscope instead of conventional laryngoscope in this patient. Several videolaryngoscopes have been developed by different manufacturers. McGrath MAC is also one such video laryngoscope with a C-MOS chip camera in place of the light bulb of McIntosh laryngoscope and a camera screen attached to the handle of the scope. The advantages of familiarity of the direct laryngoscopy and the good glottic visualization of a video laryngoscope are combined in this portable device. This should probably be of use in patients with restricted movements of the cervical spine. This case could serve as an example for this.

Figure 2: McGrath videolaryngoscope

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Conflicts of interest

There are no conflicts of interest.

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