CASE REPORT

Successful anesthetic management of a large supraglottic cyst

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ABSTRACT

Excision of a huge-sized supraglottic mass nearly obstructing the airway passage is a real challenge to anesthesiologists. Upper airway obstruction due to neoplasm in supraglottic region is traditionally managed by preoperative tracheostomy. However, such a common procedure can potentially have an impact on long-term outcome.

Key words: *Awake fibreoptic intubation, supraglottic cyst, upper airway obstruction*

INTRODUCTION

Excision of a huge-sized supraglottic mass nearly obstructing the airway passage is a real challenge to anesthesiologists. Upper airway obstruction due to neoplasm in supraglottic region is traditionally managed by preoperative tracheostomy.

CASE REPORT

A 45 year ASA 1 patient presented to the ENT outpatient department with symptoms of dysphagia without airway obstructive symptoms.

A nasal endoscopy showed a large supraglottic mass occupying almost all of the oropharynx and overlying the laryngeal inlet without actually causing any airway obstruction.

Excision of the mass which was possibly fluid filled was planned under general anesthesia. Preoperative routine investigations done as per local protocol were within normal limits.

An awake fibreoptic intubation was planned. The difficulty was two-fold, in terms of actual intubation in view of the large mass overlying the laryngeal inlet and avoiding rupture of the fluid filled cavity and in turn avoiding aspiration of the fluid [Figure 1].

All preparations for difficult airway were kept ready including rigid bronchoscope and tracheostomy. A 2.7 mm fibreoptic bronchoscope was used for awake intubation.

The awake fibreoptic procedure was started initially in supine position; however, the mass seemed to occupy the whole of the oropharynx. Arising from vallecula there was not any space to maneuver the scope to get any view of the larynx. A small left lateral tilt to the table made the mass fall to the side, enough to pass the fibreoptic scope alongside and we were able to see the laryngeal inlet. Once the fibreoptic scope was beyond the vocal cords, a seven number cuffed endotracheal tube was carefully passed over the scope. General anesthetic

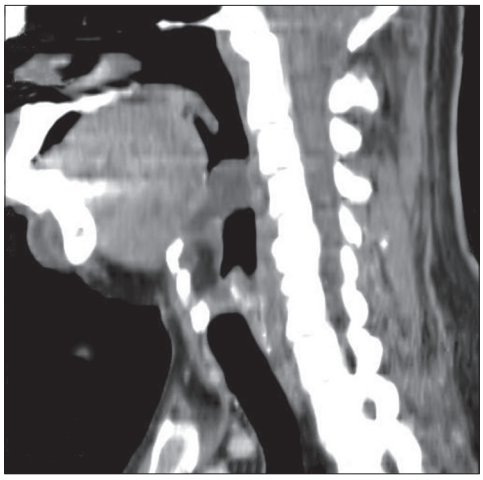

Figure 1: CT scan of neck showing the supraglottic mass

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was then induced after confirming correct intratracheal tube placement.

The mass was excised without rupture and the patient recovered uneventfully.

DISCUSSION

Potential or actual supraglottic airway obstruction can become critical when general anesthesia is begun. In carcinoma of the supraglottic larynx and in pharyngeal abscess, the unobstructed airway in the conscious patient can become impossible to secure once general anesthesia is begun. Anesthetic and surgical management of potential supraglottic obstruction includes five options: Oral tracheal intubation by laryngoscopy while the patient is awake; awake nasotracheal intubation; inhalation induction by general anesthesia with intubation; rapid sequence induction with barbiturates/propofol and muscle relaxants with intubation; and tracheostomy with local anesthesia. A method using a flexible bronchoscope is recommended for patients with a supraglottic mass in which airway management is expected to be difficult. However, intubation is difficult due to the short distance and the narrow vision when approaching the oral cavity. In addition, intubation using a flexible bronchoscope is also limited in the event of hemorrhaging or when considerable amounts of secretions such as sputum are present. Recent developments in video laryngoscope devices have shown great advancements in the field of endotracheal intubation in the last a few years. Asai and Shingu[1] stated that the small space due to the anatomical structure of the posterior pharynx and the larynx is a typical reason for a failure of endotracheal intubation using a flexible bronchoscope. Hakala and Randell[2] reported that the success ratio was high when a thick endoscope was employed. In most case reports in which endotracheal intubation succeeded with a flexible bronchoscope, the supraglottic mass was a pyriform cyst that was not firmly fixed. It was reported that a bronchoscope could be inserted by pushing the tumor mass aside with the tip, although careful operation of the bronchoscope was required in the case of a pyriform cyst due to the risk of hemorrhaging and dropout.[3-5]

A total airway obstruction has been reported during local anesthesia in a "non-sedated" patient with a compromised airway.[6]

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