

# Anaesthetic Management of a Patient Presenting with a Huge Bilateral Neck Lymphangioma Posted for Excision

Dr. Tejashree Mahind<sup>1</sup>, Dr. Deepali Thakur<sup>2</sup>

<sup>1</sup>IIIrd year Junior Resident, Lokmanya Tilak Municipal Medical College and Hospital, Mumbai.

<sup>2</sup>Associate Professor, Lokmanya Tilak Municipal Medical College and Hospital, Mumbai (Corresponding Author)

**Abstract:** *Lymphangioma is a benign tumor usually present in paediatric age group but occurrence is very rare in adult patients. Such lymphatic cysts in the cervical region poses a great challenge to the anaesthesiologists. The anaesthetic difficulties are because of the size and extension of the cyst, difficult airway, postoperative respiratory obstruction and coexisting anomalies. Here we present a case of huge bilateral neck lymphangioma and its anaesthetic management.*

**Keywords:** Lymphangioma, Awake intubation, Besdata Videolaryngoscope, Anaesthesia, Difficult airway.

## 1. Introduction

Perioperative management of cystic hygroma is a real challenge encountered by the anaesthetists. Cystic hygroma is a benign tumor usually present in a neonate or in early infancy and is rare in adults (1). Swelling usually occurs in the neck and may involve the parotid, submandibular area, tongue and floor of mouth. The anaesthetic management of cystic hygroma is a difficult situation that an anaesthesiologist has to confront, with regard to airway management, especially when it extends from the cervical region to the thoracic region (2). In this patient, huge neck swelling revealed a dilemma of difficult intubation.

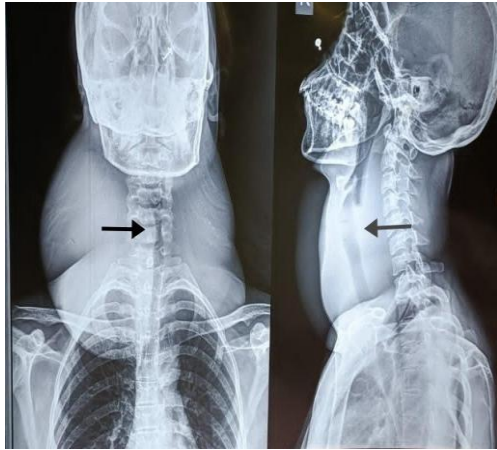
## 2. Case Report

45 - year - old female of 60kgs with no comorbidities presented to our hospital with gradually increasing large bilateral neck swelling for 12 years which was cystic in consistency. Craniocaudally it extended from lower border of mandible to clavicle and was present on either side of trachea. Posteriorly it extended till the cervical spine. Neck movements were restricted, however patient had no complaints of dyspnoea, dysphagia, or hoarseness of voice. Airway examination revealed adequate mouth opening of 5cm with a Mallampati classification of class 2. Neck circumference was 58cm, Hyomental distance was 3cm, Thyromental distance was 4cm and Sternomental distance was 14cm.



**Figure 1:** 40yrs/Female with bilateral huge cystic swelling

Routine laboratory investigations, including thyroid function test were within normal limits. An awake 70° endoscopy was done in outpatient clinic which revealed a swelling in the posterior pharyngeal wall, with normal vocal cord movements. Cervical spine Xray showed a mass with retropharyngeal extension causing anterior displacement of trachea (Figure 1). Contrast enhanced computed tomography of neck revealed two well - defined lesions with internal septations measuring 14×11×14cm on right and 11×9×14cm on left with foci of calcifications in anterior and posterior compartments of neck; extending from occipital condyles to D2 vertebra. These findings were consistent with lymphangioma.



**Figure 2:** Cervical radiograph anteroposterior and lateral view demonstrates large well defined opacity in the neck with deviation of trachea towards left (black arrow).

Patient was posted for cyst excision under general anaesthesia. Considering huge swelling and its extent causing anterior displacement of trachea, Awake orotracheal Videolaryngoscopic Intubation was planned. Standard ASA monitors were attached. Airway anaesthesia was given using 4% lignocaine nebulisation. Transtracheal block was given with injection (inj) lignocaine 2% 2cc. Premedication was done with intravenous (i. v) injglycopyrrolate 0.2mg, injmidazolam 1 gm i. v. Sedation and analgesia was given with inj. dexmedetomidine 0.5ug/kg for 10 min followed by 0.4ug/kg/hr and injfentanyl in graded doses of total 50ugs. Under videolaryngoscopic vision using D blade, patient was intubated with tube no.6 cuffed flex reinforced ETT, railroaded over bougie. Anaesthesia deepened with injpropofol after confirming the correct placement of tube with End Tidal CO<sub>2</sub> monitoring. Neuromuscular blockade was given with vecuronium. Anaesthesia maintained on O<sub>2</sub>, N<sub>2</sub>O, desflurane and intermittent vecuronium. Intraoperative analgesia was given with intermittent bolus of injfentanyl and 1gm inj Paracetamol. Inj dexamethasone 8 mg was given intraoperatively to reduce airway oedema.

Patient tolerated procedure well. Considering extensive neck dissection, patient was ventilated electively post - surgery in Intensive care unit. Following day, patient was taken inside operation theatre again and extubated under fibre optic vision after confirming vocal cord movements.

### 3. Discussion

A congenital growth with lymphatic origin is called a cystic hygroma. Inside the endothelial membrane, lymphatic gathering takes place. Cystic hygroma rarely manifests at birth, but it usually does so in the neonatal and early infant period. A large swelling may compromise the airway. Intrathoracic extension is typically ruled out using a computed tomography scan and chest X - ray (1, 2). The provision of a safe and secure airway is the most crucial stage in the anaesthetic management of such patients. The main method of airway management in patients with difficult airways is frequently an awake intubation. The cyst in our patient had spread extensively in neck region. Due to the massive swelling occluding the posterior pharyngeal space, awake fiberopticscopy was challenging. Hence, we

used awake orotracheal intubation under videolaryngoscopic vision using D blade. The tube was successfully inserted. The anaesthesiologists in these cases should be equipped to handle any emergency, such as performing an urgent cricothyrotomy in the event of an unsuccessful intubation. If an emergency tracheostomy is necessary at all, a surgeon should be on site (3).

### 4. Conclusion

Thorough pre- operative evaluation, proper planning, skilled anaesthesiologist doing gentle awake videolaryngoscopy intubation and staged extubation was necessary for successful management.

### References

- [1] Bansal R, Jaiswal S, Hooda A, Sangwan. Anaesthetic implications and considerations in a neonate with huge cystic hygroma of the neck. Paediatric Anesth Critical Care J 2015; 3: 77 - 9.
- [2] Sarita S, Sulekha S, Rituverma, Zia A, Brijbhushan k, Jaishri B. Case report: Cystic hygroma in an adult, a dilemma of difficult intubation. Int J Sci Res Publ 2014; 2: 1 - 4.
- [3] Santha N, Dhamotharan P, Osmani SG. Anesthetic management of a patient presenting with huge neck lymphatic cyst. Ann Afr Med 2021; 20: 313 - 315