# Anaesthetic Management in a Case of Recurrent Cystic Hygroma

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Abstract: Cystic hygroma is a congenital malformation of the lymphatic system that manifests itself as a soft, benign, and painless mass. They arise from the remnants of embryonic lymphatic tissue which retains the potential for proliferation. They occur almost at any anatomical site. However, 75-80% cystic hygromas are located in the head and neck region. Anaesthetic management of airway may be challenging in neonates and young infants with large neck mass and macroglossia because these patients are at risk of sudden complete airway occlusion resulting in hypoventilation and hypoxemia. Here we discuss anaesthetic management in patient of recurrent cystic hygroma.

Keywords: Recurrent Cystic hygroma, difficult airway, lymphangioma, macroglossia, pediatric anaesthesia

### 1. Introduction

Cystic hygroma is a benign tumour composed of large lymph containing cysts. A child with markedly enlarged and protruding tongue associated with neck swelling presents a unique challenge to the anaesthesiologists due to extension in the neck, airway, thorax. Pre operatively careful airway examination and planning of anaesthesia must be done. We present a case of Recurrent Cystic hygroma leading to macroglossia and neck swelling in a 4year old boy who had presented for excision.

trained anaesthesiologist was called for help .22G iv line was secured. All monitors were applied (ECG, NIBP, SpO2, EtCO2) and baseline vitals were recorded. Patient was premedicated with Inj. Glycopyrrolate 4mcg/kg i.v and Inj. Ondansetron 2mg .The child was induced with sevoflurane(4-6%) in 100% oxygen with 6 ltr/min flow. Check scopy was done with a curved blade laryngoscope. The larynx was visible. Inj. Propofol 20mg iv given and after check ventilation scoline 30mg iv was given and ET 4.5mm portex, uncuffed tube inserted, bilateral Air entry checked and tube fixed.



### 2. Literature Survey

A 4year male child 15kg presented with complains of enlarged protruding tongue, neck swelling, drooling of saliva, difficulty in swallowing, snoring for 2months.He was operated for the same at 12months of age. Patient was comfortable inpropped up position than supine. The boy was conscious, average built and moderately nourished, pulse was 100/min Blood pressure was 96/64 mmHg.Patient had pallor with Hb 9 gm%. Rest systemic examination and blood investigations were normal. Local examination revealed a diffusely enlarged tongue, protruding and keeping the mouth open with Mallampatti Grading 4 with adequate neck extension and mouth opening. The MRI showed Cystic hygroma with presence of hemorrhagic products involving tongue on either side, bilateral sublingual spaces, bilateral submandibular spaces and parapharyngeal spaces and posterior aspect of left buccal space. Chest x-ray and ECG were normal. Patient was kept nil by mouth.

Anaesthesia was maintainedby Oxygen, Sevoflurane, Inj. Atracurium 7.5mg loading and 1.5mg incremental i.v.. For analgesia Inj.Paracetamol 225mg and Inj. Fentanyl -30mcg was administered.650ml of 0.45% DNS was given intraoperatively. Blood loss was calculated and 100ml of packed red blood cell volume given. All the vitals were stable in the intraoperative period. At the end of surgery, the child was reversed with Inj. Glycopyrrolate 0.12mg iv and Inj. Neostigmine 0.75mg iv. After thorough oral and ET suction, tube removed bilateral air entry checked and was clear. Post operatively child was Conscious, crying, moving all four limbs with adequate Muscle tone and power. Respiration was regular with adequate tidal volume and vitals were stable.

#### 4. Discussion

Cystic hygorma is a benign congenital tour of lymphatic origin. Anaestheisa is challenging in young children as they are at risk of sudden airway obstruction due to large neck mass resulting in hypoventilation and hypoxemia.

#### 3. Methods

Written and informed high risk consent was taken . Preparation of difficult airway management was done. Another

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Recurrent cystic hygroma are always at risk of airway compromise. The parents of the child must be informed about the risk and complications of the mass excision.

Successful airway management of an infant or child with macroglossia prerequisites recognition of a potential airway problem. Thorough preoperative preparation and detailed examination helps in minimizing the morbidity. experienced anaesthetist as expert assistant is must. Airway maintenance during surgery is important. Considering the surgical position of hyperextension. Possibility of accidental extubation should always be considered.

Large cystic hygroma is associated with blood loss so blood should be kept ready for replacement.

## 5. Conclusion

Because of airway irregularities due to mass effect ,Cystic hygroma can present as an airway challenge to the anaesthetist. Anaesthesiologist needs to consider not only induction and endobronchial intubation but also intra operative management of the endobronchial intubation, accidental extubation and anticipation of possible post operative complications. One should plan to extubate the child post operatively after good respiratory efforts,cry and movements in view of the airway irregularities and difficult intubation . Anaesthesiologist must be ready to tackle can't ventilate and can't intubate situation.

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