



## Cervical Oesophageal Duplication Cyst in an Infant

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### Abstract

*Duplication cyst of cervical oesophagus is a rare entity in an infant. If diagnosed properly and excised precisely, we can expect a favourable outcome in this potentially dangerous lesion.*

**Key words:** Cervical oesophagus; Duplication cyst.

### Introduction

Duplication cysts represent a wide variety of mass lesions which may present throughout the gastrointestinal tract. Oesophageal duplication cysts are rare congenital cystic masses resulting from an error in foregut budding in the developing embryo with a reported incidence of 1 in 8200 autopsies. <sup>[1]</sup> Most oesophageal duplication cysts occur in the thorax; involvement of the cervical region is distinctly rare. We report a case of cervical oesophageal duplication cyst in a one year old child managed successfully.

### Case report

A one-year-old male child presented with a progressively enlarging swelling over left side of neck since three months. Parents noticed noisy

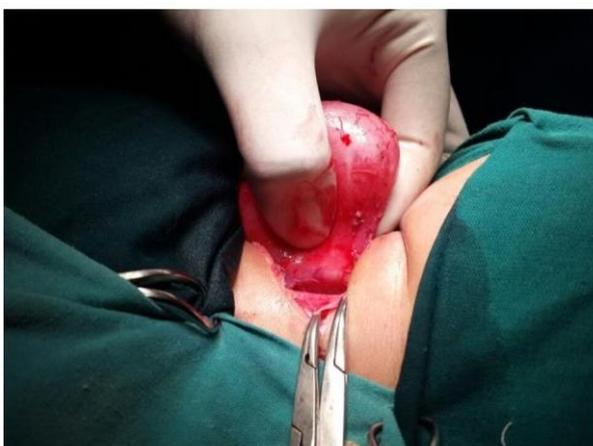
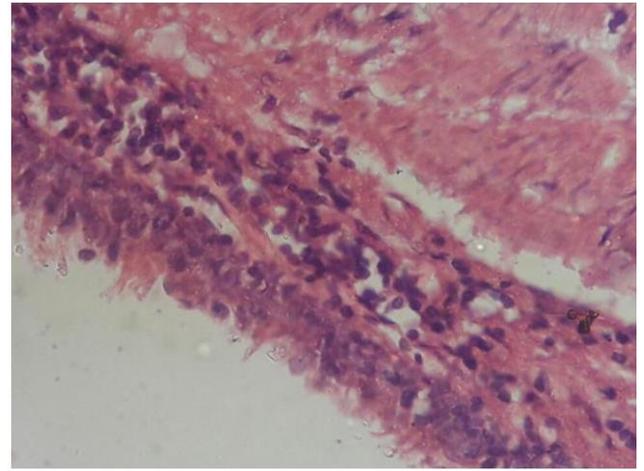
breathing one month back, which was distressing for them, otherwise the baby was asymptomatic. There was no complain of regurgitation, choking, redness or discharge from the swelling. There was no other relevant history.

Baby was thriving well; he was alert and his milestones were developed as per age. On palpation, there was a swelling of size 4×5 cm in the neck region extending from left supraclavicular to thyroid region (Figure 1). It was a non tender, mobile, cystic swelling and its margins were well felt all around. There was no swelling elsewhere in the body. Systemic examination was normal.

Routine investigations including chest X-ray were within normal limit. Ultrasonography revealed a cystic lesion compressing left lobe of thyroid and

trachea suggestive of cystic hygroma, thyroglossal or branchial cyst. Computed tomography (CT) revealed a well marginated cyst having clear fluid density in infra-hyoid region of neck compressing carotid vessels. The child was posted for resection of this mass under general anaesthesia.

The mass was excised in toto. It was in close vicinity of the oesophagus, having mucinous content that raised the possibility of duplication cyst (Figure 2). The perioperative course was uneventful. Histopathological examination was suggestive of duplication cyst (Figure 3).



### Discussion

Duplication cysts are a wide variety of mass lesions which can occur throughout the gastrointestinal tract. They can be simple and cystic, complex, multiple or tubular. Oesophageal duplication cyst is a rare congenital anomaly resulting from a foregut budding error during the fourth to sixth week of embryonic development. [1] Although duplication of oesophagus has been previously reported, majority of them have been found in thoracic oesophagus. [2,3] Cervical oesophageal duplication cysts are extremely rare and only a few cases of this cystic entity have been described in literature to date. [1,3] Infants with oesophageal duplication usually manifest with respiratory distress or asymptomatic thoracic mass, casually, detected on X-ray. [3-5]

In this case, the child presented with a neck mass with noisy breathing. These anomalies are rare causes of upper airway obstruction. [6] Upper

esophageal duplication cysts can cause stridor and nonproductive cough, while cysts in the middle and lower oesophagus can cause dysphagia, epigastric discomfort, chest pain and vomiting. [6-

<sup>8]</sup> Clinical examination and radiological evaluation gives idea about its pathology and surgical resection. CT scan remains the mainstay of presurgical diagnosis.<sup>[7]</sup> In this case, CT scan (Figure 4) was suggestive of a well marginated cystic mass in infrahyoid region with clear fluid density that was displacing carotid vessels and presurgical diagnosis of branchial cyst was made. On exploration, it was found that cyst was in close vicinity to cervical oesophagus. Without damaging adjacent structures, the cyst was excised in toto. It measured 3×5cm in size and had mucinous content within it. Histopathological findings were consistent with duplication cyst of alimentary tract. The term is reserved for cysts that fulfil the criteria established by Palmer. (1) The cyst lies within the oesophageal wall or is attached to the wall. (2) The cyst has two muscle layers. (3) The inner layer consists of epithelium of the gastrointestinal tract or respiratory tract. [7.

<sup>8]</sup> Complete excision usually leads to an excellent prognosis.

Proximity to the carotid sheath and oesophagus can make duplication cyst excision potentially dangerous hence preoperative CT scanning was useful to establish the anatomical relations of the cyst in this case. Surgical resection of lesion was complete and without any intra-operative or post-operative complication.

### Conclusion

Cervical oesophageal duplication cyst is a rare mass encountered while evaluating soft tissue neck masses in children. High degree of suspicion is required when a benign cystic lesion is seen in vicinity of oesophagus on computed tomography scan. Injury to the oesophagus must be avoided; if noticed during surgical excision, it must be repaired meticulously. Histopathological confirmation is a must for this rare entity.

**Conflict of Interest:** None

**Source of Support:** Nil

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