ENDOSCOPIC ASSISTED EXICISION OF VALLECULAR CYST- A CASE REPORT

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ABSTRACT

Vallecular cyst is a rarely encountered benign lesion of the larynx, accounting for 4.3 to 6.1% of all benign tumours of the larynx. It commonly presents mainly in neonates and in adults. This case report throws light on the various modes of presentation of the same pathological entity and its successful management. Detection of such a cyst beyond infancy is not surprising on routine clinical examination; although active surgical intervention is reserved for only symptomatic patients. This 22 year old female presented to the ENT clinic with symptoms of difficulty in swallowing, dry cough and foreign body sensation in throat over a period of 6 months.

INTRODUCTION

A vallecular cyst is a rare and a benign entity which is readily diagnosed in newborns and in early childhood and is associated with a high morbidity and mortality. It is a rare presentation in adult and may obscure view for airway intubation. In infants and children, vallecular cysts present most commonly with stridor and feeding difficulty but may cause life-threatening airway obstruction¹,². In adults, most vallecular cysts are asymptomatic but may present with globus, voice change, dysphagia, odynophagia, or dyspnea³.⁴. Vallecular cysts may also be discovered during administration of anesthesia, where they may obscure the view of the glottis and cause difficult endotracheal intubation⁵,⁶. As early as the prenatal period, vallecular cysts can be diagnosed by using either ultrasonography or magnetic resonance imaging (MRI) scan, MRI scan proves superior and is highly recommended to diagnose and to obtain thorough information regarding the relationship of the cyst to the surrounding anatomical structures and that influences the patient’s treatment greatly. It is difficult to estimate the exact incidence of vallecular cysts, however, the reported incidence on laryngoscopy ranges between 1 in 1,250 to 1 in 4,200 people and 10% of the population⁷,⁸. Vallecular cyst displaces the epiglottis inferoposteriorly obstructing the supraglottic space and the airway obstruction also results from the mass effect the cyst exerts to the hypo-pharynx⁹. We report an uncommon case of vallecular cyst in an adult.

CASE REPORT

A 22 year old female presented to ENT department with chief complaints of difficulty in swallowing solid foods, foreign body sensation throat and dry cough for the past 6 months. All these symptoms were insidious in onset and progressively worsening in nature. There were no complaints of change in voice, respiratory distress or noisy breathing.

On oral examination, a hemispherical midline swelling was seen posterior to the base of tongue. Indirect laryngoscopy showed a solitary, smooth surfaced, pink hemispherical mass of size about 1x1x1 cm seen in midline occupying the Vallecule. Median glossoepiglottic fold and the lingual surface of epiglottis were not visualized. Videolaryngoscopy confirmed the findings.

Patient taken up for endoscopic transoral excision of the mass in the vallecula under general anesthesia. Patient intubated with micro laryngeal tube and the cyst was visualized using flexible endoscope. The cyst was opened drained and the wall of the cyst was released from the lingual surface of epiglottis and the median glossoepiglottic fold. Drained fluid was thick mucoid in nature.
Histopathology of the cyst wall showed tissue fragments lined by stratified squamous epithelium, underlying tissue shows dense infiltration with neutrophils and lymphocytes with edema, features suggestive of benign cyst – Vallecular cyst. Post operatively patient was symptom free and was discharged on the first post operative day. Patient is on regular follow up and there is no recurrence after 6 months post op.

DISCUSSION
Laryngeal cysts are fairly uncommon but have stimulated interest because of their potential for morbidity and mortality. Abercrombie provided the first description of laryngeal cyst in the year 1881. The commonest of the laryngeal cyst is the aryepiglottic cyst, followed by vallecular cyst, ventricular cyst and subglottic cyst.

Vallecular cyst is a rare benign lesion which commonly arises from the lingual surface of the epiglottic region. It is known as epiglottic mucous retention, or base of the tongue cyst, and is classified as a ductal cyst that results from obstruction and retention of mucus in collecting ducts of submucosal glands containing clear and non-infected fluid. Ductal cysts may occur at any location lined by mucosa and can be found at any site in the larynx other than the free edge of the true vocal cords. Vallecular cysts resembling tonsillar crypts due to associated lymphoid tissue have been separately classified as lymphoepithelial cysts and may also occur in the aryepiglottic fold, vestibule, and piriform sinus.

This cyst is uncommon and its exact cause is unknown. In adults, vallecular cysts are more common but less dangerous. The peak incidence is in the fifth decade of life, and the majority of cysts occur in men. Nearly two-thirds of vallecular cysts are asymptomatic and are diagnosed incidentally on routine laryngeal examination.

Several theories explained its pathogenesis. However, two major hypotheses are that the cyst is a consequence of ductal obstruction - Cyst occur as a result of mucous gland obstruction within the mucosal lining and that leads to cyst formation and continued secretion is responsible for the increasing size of the cyst. It is also hypothesized that lymphatic malformation, angiomatous (embryological malformation) as some of the potential causes of a vallecular cyst.

The mode of presentation of laryngeal cysts is based on their position and size. In neonates the common presentation is various degrees of upper airway obstruction such as cyanosis, apnea, increased respiratory effort, chest retraction and inspiratory stridor. Presentation of failure to thrive and feeding difficulty is common in infants. Also associated condition like secondary laryngomalacia must be watched for. Altered airway dynamics causes elevated inspiratory negative pressure and supraglottic prolapsed. Respiratory airway distress that occasionally leads to stridor, cough, dysphagia, dysphonia, foreign body sensation and death and is readily diagnosed but not only limited to newborns and infants.

Indirect laryngoscopic, videolaryngoscopic, flexible laryngoscopic or bronchoscopic examination is performed to diagnose the vallecular cyst. A cystic swelling of variable size can be visualised occupying the vallecula with the attachment mostly to the lingual surface of epiglottis. If mass is not cystic, further evaluation by CT, MRI, thyroid scan, neck sonogram and barium oesophagogram can be helpful.

Differential diagnosis of hemangioma, cystic hygroma, teratoma, hamartoma, dermoid cyst, lymphangioma, thyroglossal duct cyst and thyroid remnant cyst should be considered.
Diagnosis is confirmed by cyst puncture and therapeutic marsupialisation under general anaesthesia. Surgical removal of the cyst using electrocautery, laser or microdebrider is the treatment of choice. Marsupialisation is safe and definitive procedure when performed by CO2 laser. Aspiration of cyst is associated with high recurrence rate. In our case, the patient had complaints of difficulty for swallowing solid foods, dry cough and foreign body sensation of throat. The cyst was large enough to be visible via oral examination itself, but the patient did not have any symptom of respiratory distress. The patient was evaluated and taken up for surgery at the earliest due to the risk of upper airway compromise.

CONCLUSION
Vallecular cyst is a rare benign lesion of the larynx. It is a rare presentation in adults. Incidence of the vallecular cyst is very rare worldwide (0.25%). Benign lesions of larynx constitute about 4.9% of all laryngeal tumours in total population. Among these, vallecular cysts constitute about 5%. Reported cases shows male predominance and common in 5th decade. Our patient was a 22yr old female. It can have a varied presentation ranging from dry cough and foreign body sensation throat to inspiratory stridor. Early diagnosis and intervention is important to prevent fatal complication like severe upper airway obstruction leading to morbidity and mortality due to this rare entity.

References