Case Report:
Huge Epiglottic Cyst Presenting as Obstructive Sleep Apnoea.

Authors
Vinish Agarwal, Assistant Professor, (ENT),
SS Bist, Professor & Head (ENT),
Mamita Goyal, Assistant Professor (Radiodiagnosis),
Bhartendu Bharti, Assistant Professor (ENT),
Uday Monga, Senior Resident (ENT),
Himalayan Institute of Medical Sciences, SRH University, Jolly Grant, Dehradun - 248140, India.

Address for Correspondence
Dr Vinish Agarwal,
Assistant Professor (ENT),
Himalayan Institute of Medical Sciences,
Swami Rama Himalayan University, Jolly Grant,
Dehradun, Uttarakhand - 248140, India

E-mail: vinish143agra@yahoo.co.in

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Abstract: Epiglottic cysts are benign lesions which are either incidental findings or they present as mild dysphagia and hoarseness or some degree of respiratory obstruction. We report a rare case of adult male with huge epiglottic cyst presenting as obstructive sleep apnoea. A 50 years aged male presented with chief complain of loud snoring for one year. He also had mild dysphagia and feeling of lump in the throat. After detailed examination and polysomnography this patient was diagnosed as obstructive sleep apnoea due to huge epiglottic cyst. This patient underwent successful cyst excision under general anaesthesia. Six weeks post operative repeat polysomnography of patient showed marked improvement. We discuss the epiglottic cyst as a cause of snoring and emphasize the importance of routine check-up of larynx in diagnosing and anaesthetic and surgical skills in managing this rare condition.

Key Words: Epiglottic cyst, Obstructive sleep apnoea, Polysomnography

Introduction:
Epiglottic cysts are benign lesions of the larynx which clinically present according to their size and location. Epiglottic cysts are mostly asymptomatic incidental findings or they may present as variable degree of respiratory obstruction including stridor, difficulty in deglutition, and hoarseness of voice or throat irritation. Obstructive sleep apnoea (OSA) is characterized by episodic partial or complete obstruction of the upper airways during sleep which presents with snoring, day time sleep, morning headache, and personality changes. The gold standard investigation for sleep disorder is full polysomnography which provides recording of sleep apnoea index.

Case Report
A 52 years aged male presented with chief complain of loud snoring for one year. He also had mild difficulty in deglutition for solid and semisolid food. Patient also had feeling of lump in the throat for which he was fearful as patient also had habit of smoking since last 20 years. There was no history of weight loss, with normal bowel and bladder history. Patient also gave history of excessive day time sleepiness. Oropharyngeal examination revealed midline cystic mass arising just behind the base of tongue which was filling whole of the oropharynx. Laryngopharynx and endolarynx details were obscured by the midline cystic mass. On diagnostic nasal endoscopy no abnormality was detected in either of the nasal cavity or nasopharynx. On telescopic laryngeal examination cystic mass was seen filling the oropharynx and reaching up to lower limit of nasopharynx, but exact origin site of this cyst could not be made out (Figure 1). On laryngeal examination vallecula and epiglottis details could not be made out, but both true vocal cords were mobile, endolarynx was within normal limit and both side pyriform fosses were clear. So clinical diagnosis of epiglottic cyst was made in this case and patient was referred for polysomnography for his complain of snoring. On polysomnography patient was labeled as having obstructive sleep apnoea, which was most likely due to huge epiglottic cyst as there was no other significant risk factor for OSA other than the smoking. Patient also underwent computerized tomography scan which showed non enhancing cystic lesion in left vallecula measuring 5cms x 6cms, indenting the left epiglottis with no impairment of laryngeal airway (Figure 3).
So with the diagnosis of epiglottic cyst we posted the patient for epiglottic cyst excision under general anaesthesia. Despite of huge epiglottic cyst our anaesthetist was able to intubate orally with number 6 cuffed endotracheal tube. During the surgery we punctured the cyst and approximately 65 ml thick cheesy material was suctioned out. After this we were able to identify origin of cyst at left side lingual surface of epiglottis. By meticulous dissection and with the help of suctioned electric cautery we were able to remove this epiglottic cyst in toto (Figure 2).

Patient was discharged after three days and followed on two weeks and six weeks post operative period. Patient underwent repeat polysomnography six week post operative and he showed marked improvement.

Discussion

Laryngeal cysts constitute 4.3% to 6% of all benign laryngeal tumours.[1] Abercrombie J reported first case of laryngeal cyst in 1881.[2] About 52% of the laryngeal cysts originate from lingual surface of epiglottis.[3] DeSanto et al classified cystic lesions of larynx into saccular and ductal types.[4] Asherson made minor changes to classification of laryngeal cystic lesions by adding one more category i.e. Thyroid cartilage foramina cyst.[5] The characteristics that determine the mode of presentation of laryngeal cysts appear to be their position and size. Epiglottic cysts are usually asymptomatic and may present with minor symptoms. Clinical presentations of epiglottic cysts include stridor, feeding problems, failure to thrive, gastroesophageal reflux, apnoea / cyanosis, chest retractions, hoarse cry, as well as respiratory distress and life threatening events.[6,7]

This patient was diagnosed with OSA on polysomnography as presenting feature was loud snoring. Risk factors for OSA include obesity, cardiovascular diseases, cerebrovascular diseases and metabolic syndrome. Factors including body mass index, neck soft tissue mass, parapharyngeal and lingual adipose deposition, body fat distribution, alcohol consumption, active or passive smoking, reflux male gender and increasing age all play a role in epidemiology of OSA.[8] Indirect laryngeal mirror or telescopic laryngeal examination may provide the diagnosis of an epiglottic cyst, and further imaging studies may be needed. Neck lateral X-Ray may mimic acute epiglottitis with thumb sign. CT scan can demonstrate a non enhancing cystic mass at the tongue base. Treatment of epiglottic cysts depends on their size and on the clinical symptoms. Surgery is necessary for large ones. Various modalities of therapy include endoscopic excision, marsupialisation, and deroofing with or without a CO2 laser.[9,10] A lateral pharyngotomy approach to remove the cyst is preserved for recurrent cases.[10,11] An endoscopic technique with a CO2 laser can be successfully applied in nearly all cases due to the laser's good haemostatic effect.[12] To avoid local recurrence, the cyst wall has to be completely...
resected.[12] Surgery can usually be done under oral intubation, but is difficult in a patient with a huge cyst. Aspiration of the contents to reduce the cyst size helps and can avoid a tracheostomy. Prophylactic antibiotics and adequate hydration after surgery are always utilized to avoid acute epiglottitis.[11]

**Conclusion:**
Epiglottic cysts are benign lesion which can present in different ways according to their size and position. As in our case these cysts gradually increases in size and rarely may present as loud snoring. Patient may be fearful of these mass as these cyst may give feeling of lump in throat and they may become cancer phobic. Snoring is the presenting symptom of OSA and can be diagnosed by polysomnography. These cysts may pose challenge to anaesthesit and surgeon for intubation and excision. Due care has to be taken while dealing with these cases as they may come with respiratory obstruction and some time may become life threatening to the patient.

**References**