



ESOPHAGEAL PERFORATION AND CHICKEN BONE MIGRATION INDUCED VOCAL CORD HYPOMOBILITY, SURGICAL EMPHYSEMA, PNEUMOTHORAX, PNEUMOMEDIASTINUM, HYPOTHYROIDISM AND THYROID ABSCESS AND SEPTICEMIC SHOCK : CASE REPORT AND REVIEW OF THE LITERATURE

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Abstract:

Hypothyroidism along with thyroid abscess is a very rare condition and not frequently encountered. It is an emergency as indicated with surgical emphysema and hypothyroidism along with pneumothorax and pneumomediastinum. Esophageal abscess and perforation along with pneumothorax, pneumomediastinum and surgical cervical emphysema was diagnosed by HRCT NECK AND THORAX. The foreign body extruded after rupture of esophageal abscess and patient treated for the underlying complications.

Introduction:

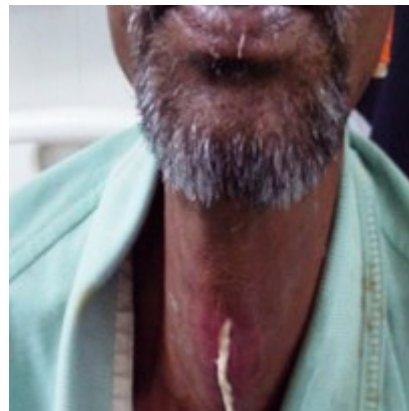
Hypothyroidism with thyroid abscess, surgical emphysema, pneumothorax, pneumomediastinum are generally very rare in adults more so if caused due to ingested chicken bone. In adults most common foreign body is generally fish bone but chicken bone is not rare. The diagnosis of extraluminal foreign is generally radiological and an emergency high resolution computed tomography scan should be carried out. Proper treatment also includes intervention of other disciplines like Cardio-thoracic vascular surgery, Microbiology, Pathology, Radiology, Biochemistry and Cardiology in order to avoid any following life-threatening condition.

Case Report:

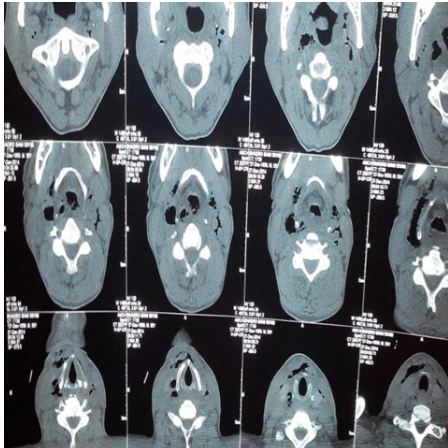
A 55 year old man presented to the emergency department with increasing pain during deglutition, gradually enlarging mass in the anterior neck and hoarseness of voice 6 days after eating chicken. He had visited an otolaryngologist but the specialist was not able to extrude it out. The patient was having respiratory distress , hoarseness of voice, increased body temperature and shock when he first presented to the emergency department which subsided with proper conservative medications. His blood pressure was 88/50 mm of Hg.

Laboratory data were as follows: white blood counts 9600per mm³ , ESR 100 mm AEFH, Differential count N94 L6 M0 B0 E0 , random blood sugar 147 mg/dl, serum Na⁺ 151.8 mmol/lit, K⁺ 4.07 mmol/lit. ECG showed and ST-T change in the inferior lead ,which was probably due to pneumothorax .Lateral view of the soft tissue neck revealed a thin radio-opaque linear foreign body at cervical C6 and C7 . The HRCT scan showed a suspected rent near the right ary-epiglottic fold and air foci noted in posterior mediastinum around trachea, parapharyngeal, pre-vertebral and pre-tracheal space and paroesophageal region up to the level of gastro-esophageal junction and anterior aspect of subcutaneous tissue of neck and apical pleural region on right side .

Esophagus was also dilated on CT Scan . Esophagoscopy was done under general anaesthesia and edema noted from beginning of the upper esophageal sphincter and upto 20 cm from the upper incisor. A perforated area was noted at 20 cm of esophagus on left anterolateral position and the lumen was full of pus as pus was extruding from this site. The abscess was drained and the culture report showed growth of Klebsiella , streptococcus species. Thyroid profile showed T3 0.3 ng/ml and USG Neck showed thyroid abscess . 700 Endoscopy showed hypomobile vocal cords and congested ary epiglottis, oedematous arytenoids and a rent near the right ary- epiglottic fold. However , no mass lesion or foreign body was found. The thyroid abscess was drained and he was put on meropenem, metronidazole, hydrocortisone, rabeprazole and aminoplasma. Ryle's tube feeding was started after proper endoscopic guided Ryle's tube insertion.



Clinical photograph of the patient showing pus draining from the anterior neck



CT scan neck showing abscess in the anterior compartment



Xray soft tissue neck lateral wall showing radio opaque foreign body at the level of cricopharynx.

His recovery was uneventful.

Discussion:

Thyroid abscess with hypothyroidism, pneumothorax, pneumomediastinum, cervical surgical emphysema is very rare multiple etiologies have been proposed for it. The development of abscess secondary to direct foreign body trauma as well as extension from neighboring anatomical structure can be accepted as an etiological factor. These cases are mostly associated with acute symptoms like respiratory distress, hoarseness of voice, increased body temperature, septicemia and shock. This way of presentation of an esophageal foreign body is extremely rare and rarely reported. The ingestion of foreign bodies results in gastrointestinal perforation in about 1% of cases[1]. However unusual conditions such as extraluminal migration of the bone to adjacent structures may occur. The most common site of penetration is cervical esophagus. The longer the foreign body is impacted the higher is the risk of perforation. The diagnosis of extraluminal foreign body is facilitated by a high index of suspicion. The most common causative organisms have been streptococcus, staphylococcus and klebsiella. One of the first investigation to be done for proper diagnosis is soft tissue radiograph lateral view. A HRCT thorax and neck is an extremely important tool in the diagnosis of such a complicated scenario. Surgical intervention should be done in such cases to prevent profound sepsis and further morbidity.

Conclusion:

Complications of foreign bodies include esophageal perforation with periesophagitis, periesophageal abscess, mediastinitis, and /or vascular complications such as aortoesophageal fistula, innominate esophageal fistula, and carotid rupture[2]. Esophagoscopy and thyotomy is a must in such cases a surgical debridement along with a course of antibiotics and steroids is crucial for disease treatment.

References:

1. Goh BK, Tan YM, Lin SE, et al. CT in the preoperative diagnosis of fish bone perforation of the gastrointestinal tract. *Am J Roentgenol* 2006; 187: 710-4
2. Remson K, Lawson W, Biller HF, et al . Unusual presentations of penetrating foreign bodies of the upper aerodigestive tract. *Ann Otol Rhinol Laryngol* 1983; 105:32-44