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Original Research Paper

A Case Report of Bronchoesophageal Fistula Secondary To Oesophageal Carcinoma Presenting With Cough

Medical Science

KEYWORDS :

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Introduction:
Bronchoesophageal (BE) fistula, is a communication between bronchus and esophagus. Bronchoesophageal (BE) fistula is considered a rare anomaly in comparison to Tracheoesophageal fistula .A common presenting feature is recurrent pulmonary infections with other uncommon presentations being recurrent coughing bouts with meals and rarely haemoptysis.Bronchoesophageal fistula are often caused by locally advanced esophageal cancer and lung cancer, and resulting in life-threatening conditions such as severe cough and dyspnea due to pneumonia. In developing countries where tuberculosis is endemic, tuberculosis should be considered as a cause.We here in report the clinical characteristics of 35 years female with bronchoesophageal fistula secondary to esophageal carcinoma 2.

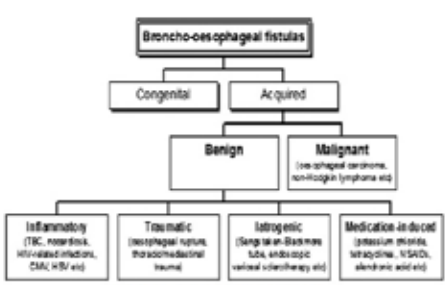
Cough – A forced expulsive reflex/ maneuver against an initially closed glottis causing a characteristic sound , that helps to protects the lungs from aspiration of upper airway secretions and from inhaled particles and secretions.

Differential diagnosis of cough
Acute cough (< 3 weeks)- upper respiratory tract infections, allergic rhinitis, pneumonia, exacerbations of COPD and asthma, CHF, lung cancer, pulmonary embolism, acute environmental exposure to dust and chemicals.

Subacute cough (3-8 weeks)- upper respiratory tract infections, exacerbations of COPD, asthma and bronchiectasis, Bordetella pertussis infections.

Chronic cough (> 8 weeks)- upper airway cough syndrome, asthma, GERD, ACE inhibitors, chronic bronchitis, bronchiectasis, sarcoidosis, tuberculosis, lung cancer.

Etiological classification of Broncho-oesophageal fistula:



Graph 1. Classification of broncho-oesophageal fistulas

Case report:
A 35 year female patient presents with dry cough from last 2 months and difficulty in swallowing since 14 days. The patient presented with Cough which was insidious onset, gradually progressive it nature, non productive, no diurnal variation, no postural variation, increased on meals, no relieving factor. The patients complaints of dysphagia to solids and liquids, with cough on fluid intake. H/o loss of weight and appetite. There was no history of hemoptysis, hematemesis, fever, breathlessness , chest pain and abdominal pain.

Past history:
No past history of TB, DM, HTN, trauma or any chronic illness in past.No history of previous surgery.

Personal history:
She is Non smoker, Non alcoholic or Non tobacco chewer, normal bowel and bladder habits.

Family history:
No history of TB, DM, HTN in family

Examination:
Patient is conscious, well oriented to time, place and person

Vitals:
Temperature – 98.6 Fº

Pulse- 90 beats/min

Blood pressure- 110/70 mm Hg

Respiratory rate- 16 cycles/min

Sp02- 98 %

Pallor- Present

JVP- Not raised

Clubbing/Icterus/Cyanosis/Oedema/ Lymphadenopathy- absent.

Systemic examination:
Respiratory examination revealed no abnormal findings on inspection, palpation, percussion, auscultation.Abdominal examination reveals no organomegaly or any other palpable mass. CVS and CNS examination was with in normal limits.

Investigation:
Routine haematological investigations (Blood counts, Liver function tests, renal function tests) were :

Hb- 9.2 gm %. TLC- 11,500 /mm3. DLC- P- 77%, L-20 % , E-2%, M-1 %. GBP- Microcytic hypochromic anemia. Liver function test :-SGOT- 40, SGPT- 34, S.Bilirubin (total)-1.0 , S.bilirubin(direct)- 0.5. Renal function test :- Blood urea-36 , S.Creatinine-0.8 , BUN- 12 mg/dL, S.Na- 133 mg% , S. K+- 4.0

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Chest X Ray PA View:

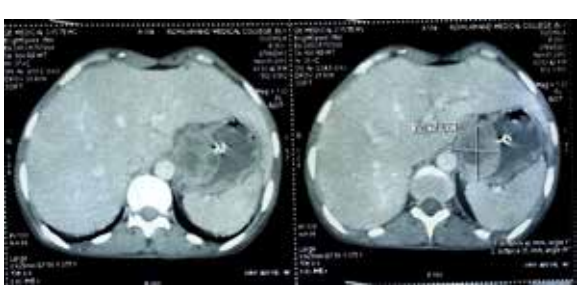
Chest x-ray was with in normal limits.

Barium Swallow:

Barium swallow revealed spillage of dye over tracheobronchial tree.

Ultrasonography – Whole Abdomen
USG abdomen was done which revealed secondary's in liver .

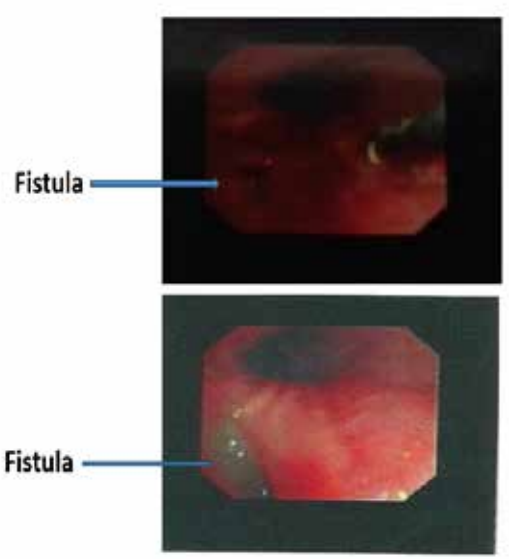
CECT Thorax:



CECT chest reveals heterogeneously enhancing mass lesion in posterior mediastinum at the level of carina extending upto cardio-oesophageal junction and both lungs are normal in size and attenuation. These findings suggestive of mid and lower esophageal mass with possible erosion of the trachea and secondary in liver and spine.

Heterogenously enhancing mass in esophagus as seen on CT scan

Broncoscopy Findings:-



Broncoscopy findings revealed an opening in left main bronchus near carina.

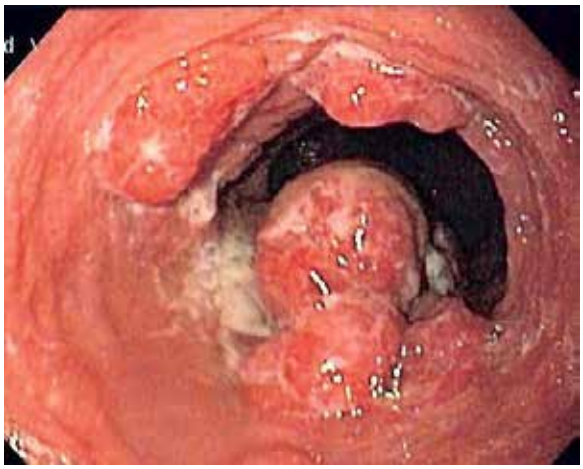
Secretions coming out from the opening.
Rest of the Left tracheobronchial tree was normal upto visible segments and subsegments.

Right tracheobronchial tree is normal upto visible segments and subsegments.

Biopsy was taken from margins of fistula present at the left main bronchus which revealed poorly differentiated carcinoma.

Impression – Left sided bronchoesophageal fistula .

Endoscopy Findings:-



Endoscopy reveals mass in mid oesophagus and biopsy was taken, which revealed undifferentiated carcinoma (Giant cell carcinoma)on histopathological examination. Because of growth, the endoscope couldn't be negotiated further so the fistula was not visible on endoscopy.Impression :- ? CA oesophagus .

Discussion:-

BE fistula in adults are less commonly reported in literature. Congenital BE fistula are usually diagnosed in neonatal period, but in few cases, they may remain silent till adulthood. Adult BE fistula are mostly acquired in nature. Acquired causes of BE fistula include malignancies involving oesophagus or adjacent structures. Benign conditions causing fistula are less common and consist of infections like tuberculosis, syphilis, histoplasmosis, actinomycosis, and candidiasis. Tuberculosis being an endemic in India should always be considered in the differential diagnosis of BE fistula. Other conditions known to cause fistula include inflammatory conditions like Crohn's disease and Behect's disease, broncholithiasis, and corrosive ingestion. Acquired fistula are frequently misdiagnosed. They are characterized by bouts of coughing while eating or drinking (Ohno's sign) and with recurrent pulmonary infections. Delay in diagnosis may be complicated by pneumonia, life-threatening hemoptysis, and respiratory failure. Conventional barium oesophagography is considered to be the most sensitive test for diagnosing BE fistula.

Definition :-

Conclusion:-

Acquired BE fistula can have diverse causes like oesophageal carcinoma.

High index of suspicion is required to diagnose the fistula and ascertain its cause.

The diagnosis should be reconsidered while managing such patients especially when no other cause is evident in patients who present with cough.

A variety of patients present with cough in the OPD/IPD clinic, generally with a respiratory cause , but before making an affirmative diagnosis its advisable to do complete set of GIT, cardiovascular, neurological, endocrine examination to make the final diagnosis.

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