

## Case Report

# An Unusual Cause of Dysphagia

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A forty nine year old female housewife, presented to us with cough, dyspnoea on exertion, right sided chest pain, dysphagia of 3 weeks duration and hemoptysis of 5 days duration. Her complaints started as cough, which was productive with moderate amount of mucoid sputum, with no postural or diurnal variation. She had dyspnoea, which was grade 2 in severity and non progressive with right sided continuous, dull aching type of pain which gets radiated to back of upper chest. She found it difficult to swallow liquids more than solids for the past 3 weeks. She was having hemoptysis, about 30 ml of blood with clots for the initial 2 days and later became streaky. She did not give any history of fever, loss of weight, hematemesis, melena, hoarseness of voice or stridor. She had history of pulmonary tuberculosis 20 years back, for which she took anti-tuberculosis treatment. She also gave history of allergic symptoms with recurrent respiratory tract infections for the last 15 years, with 1 episode of hemoptysis 10 months back. There was no previous history of diabetes mellitus, hypertension or coronary artery disease.

On examination, she was moderately built and nourished, vitals were stable. On respiratory system examination, there was tracheal deviation to right side with apex beat in normal position, increased tactile vocal fremitus over right supraclavicular, infraclavicular and suprascapular areas, with an impaired note on percussion, increased vocal resonance and a bronchial breath sound heard over above said areas. Other system examination was within normal limits.

Her routine blood investigations showed a hemoglobin of 9.8 gm%, with a raised ESR of 62mm/hr. Her sputum AFB was negative and Tuberculin skin test with 5 TU

was non-reactive. Chest X-ray revealed a homogenous opacity in the right upper zone with well-defined upper, lateral and lower borders and medial border not clearly demarcated (fig 1) with an air-crescent. So we suspected cavity with fungal ball and proceeded with CT Thorax, which showed bronchiectasis in anterior basal segment of left upper lobe and posterior segment of right upper lobe, dilated esophagus in the upper thoracic region and right apical fibrosis – post tuberculosis sequelae (fig 2). In view of her dysphagia, a barium swallow X ray was obtained, which revealed a wide-mouthed traction diverticuli with air-fluid level arising from posterolateral wall of esophagus, which is seen to fill with orally administered contrast, from the level of T1 to T4 vertebra. Contrast is seen to empty partially. No evidence of free spillage into tracheobronchial tree, pleural space and mediastinum (Fig 3).



Fig 1 : Chest Xray

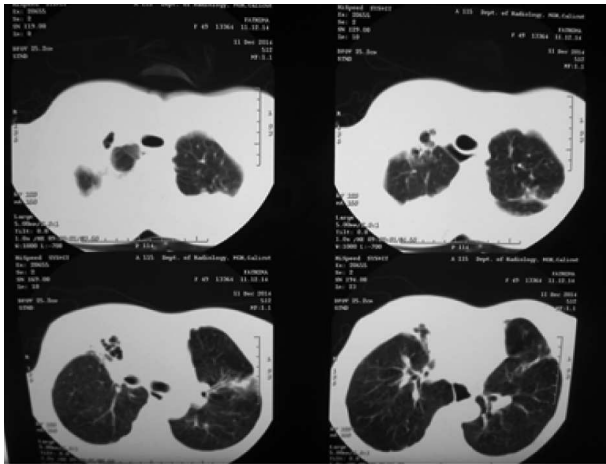


Fig 2 : CT Thorax



Fig 3 & 4 : Barium swallow

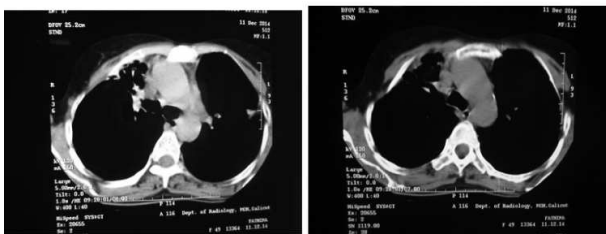


Fig 5 & 6 : CT Thorax

We proceeded with a gastrosurgery consultation and was advised conservative management only. So we came to a final diagnosis of bilateral bronchiectasis – secondary infection, right apical fibrosis, traction diverticuli esophagus, post tubercular sequelae. She was managed with antibiotics, bronchodilators and other supportive measures. She responded to the treatment and got discharged after 1 week.

## Discussion

A diverticulum is a sac or pouch arising from a tubular organ. An out pouching of mucosa through muscular layer of esophagus is known as esophageal diverticulum. It can be classified into

- Congenital / acquired.
- True / false
- Pharyngoesophageal / midesophageal/ epiphrenic

## Acquired diverticulum

**Pulsion :** Due to high intraluminal pressures against weakness in the GI tract wall leading to herniation of mucosa through defects in muscular layer. It is a false diverticulum.

Eg :Zenker’s diverticulum

**Traction :** Due to pulling forces on the outside of esophagus from an adjacent inflammatory process. It is a true diverticulum.

Eg : TB , Histoplasmosis.

## Mid esophageal diverticulum

Also known as Parabronchial diverticulum. It was first described in 19th century. Historically inflamed mediastinal lymphnodes from an infection with TB accounted for most cases. Most common in the middle 1/3rd of thoracic esophagus. Other causes include histoplasmosis, fibrosing mediastinitis. Resultant desmoplastic reaction in para-esophageal tissue causes full thickness pinching on esophageal wall, producing a conical, broad-mouthed true diverticulum. It often project to right side because subcarinal lymph nodes in this area are closely associated with right anterior wall of esophagus and because of over abundance of structures in mid thoracic region of left chest. This type is commonly seen in middle aged adults and elderly. Dysphagia, postural regurgitation, belching, retrosternal pain, heartburn and epigastric pain are the usual symptoms. Pulmonary symptoms include mild nocturnal cough to life threatening massive aspiration.

## Diagnostic Evaluation

- It includes Chest X ray, Barium esophagogram, CT Thorax, Esophagocopy and Manometry.
- It is an incidental finding in routine imaging stud-

ies. Chest X-ray and CT thorax may show air-filled & / or fluid-filled structures communicating with esophagus. CT thorax also helps to identify mediastinal lymphadenopathy and may help to localize the sac. Barium radiography is the diagnostic procedure of choice. Esophagoscopy is done to rule out mucosal abnormalities, including cancer and identifying a fistula. Manometry helps in identifying a primary motor disorder.

## Management

- Determining cause is critical. Asymptomatic with inflamed mediastinal lymph nodes from Tuberculosis/Histoplasmosis needs treatment with Anti tuberculous treatment/ Antifungal agents. If the size is <2cm, observation is the rule. If symptomatic or size  $\geq$  2cm, we may go for surgical intervention. The

options include-Diverticulopexy / Diverticulectomy / Long esophagomyotomy.

## References

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