

## Use of Non-conventional investigation techniques in a case of foreign body impaction in oesophagus- our experience

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### INTRODUCTION

Chronic alcoholism impairs the lung's defensive mechanism leading to an increased susceptibility to respiratory infections, in turn, leading to increased incidence of ARDS in these populations [1]. Alcoholics are also at risk of developing aspiration which is common in an intoxicated person due to the loss of protective airway reflex [2] after he/she "passes out".

The usual thought process that runs in mind when a foreign body oesophagus presents is to perform a CT scan to know the position of the foreign body and then proceed with further management techniques. [3]

Here we are presenting a case of respiratory failure following an episode of binge drinking of alcohol which was caused due to an impacted chicken bone leading to perforation of oesophagus and development of pyothorax. Also to be noted in the case is use of modalities other than CT scan to diagnose and to treat the condition.

### CASE REPORT

A 50-year-old male came to the Emergency Room with complaints of right sided chest pain and dyspnoea (grade III). Pain started 3 days ago but the patient did not consult any doctor because the pain was "bearable". There were no other comorbidities and no significant previous history. Vitals on arrival were 143/min Heart Rate, 140/90mm Hg of Blood Pressure, Respiratory rate of 46/min with saturations of 96% with Oxygen mask at 4 litres of Oxygen. Auscultation revealed decreased air entry on the right side of chest. Chest x ray as shown in ( Image 1)



Image 1

Patient was admitted with a provisional diagnosis of Respiratory Failure and a 2-dimensional echocardiography was ordered. It showed right heart dilatation and moderate Pulmonary Arterial Hypertension. Meanwhile, the patient was intubated electively after a failed trial of Non-Invasive Ventilation. Intubation was difficult but the airway was ultimately secured. An infusion of Atracurium (25mg) and Fentanyl (500mcg) was started at 5ml/hr. A central venous access was established and a Foley's catheter inserted.

Baseline investigations were sent and the patient's history was taken in detail again, this time from his attendants. It was found that the patient had been binge drinking for the past 3 days and had not had any food. He had multiple episodes of vomitings in this 3-day period. Patient was started on antibiotics and nebulisations.

The differential diagnoses made were Pulmonary Thrombo-Embolism, Aspiration Pneumonia and Community Acquired Pneumonia

The next day a USG chest was performed and that revealed a loculated hydropneumothorax, a pneumomediastinum and a left moderate pleural effusion and the most shocking of results- a linear hypodense lesion in the distal oesophagus with oedematous oesophageal wall (? Foreign body) with possible oesophageal perforation causing pneumomediastinum.

The patient was scheduled for an Upper Gastrointestinal Endoscopy following the findings of Sonography chest. It revealed a 3.7cm long bone impacted transversely at the lower oesophagus ( image 2) and causing perforation at both ends of the oesophageal wall. The foreign body was disimpacted and

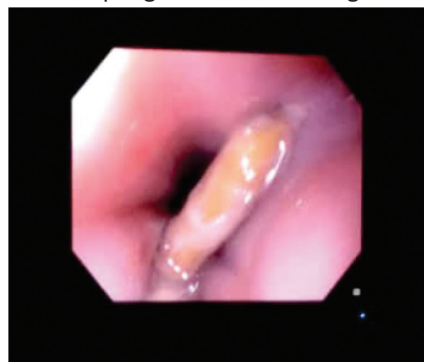


Image 2

An Intercostal drain was placed bilaterally in the 5th Intercostal Space. Immediately after placement 900ml and 300ml of frank pus aspirated from the right and left sides respectively. [4] The aspirated pleural fluid was sent for CytoAnalysis. Atracurium+Fentanyl infusion was continued.

1650ml and 500ml pus was found in the drains the next morning and a chest radiograph showed significantly improved lung expansion, on auscultation the air entry was much better in comparison to when admitted.

Next day, the patient was given T-Piece trials and extubated successfully. Saturations were holding at 96% with 2litres/minute of Oxygen via Nasal Prongs. Patient was mobilised out of bed and started on enteral feeding via a Naso-Gastric Tube. Sonography chest was done again and it showed left sided minimal pleural effusion and basal consolidatory changes in lower lobe of the left lung.

The day after that, the left sided ICD was removed patient was scheduled for an Oesophagogram which showed dye leakage from the lower end of oesophagus, was advised to redo again after a week. A CT chest with contrast showed contrast leak from the distal third of oesophagus into the left mediastinum around the descending thoracic aorta and into the right pleural cavity( image 3)

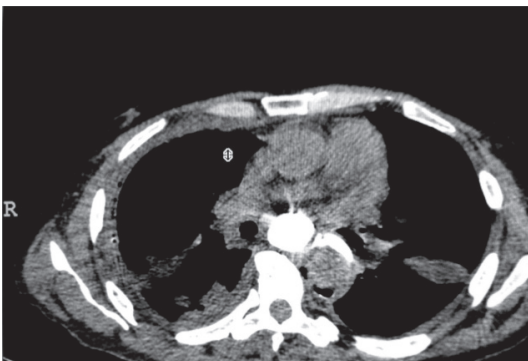


Image 3

Another 10 days go by and as advised an Upper Gastro intestinal endoscopy (UGIE) is performed. Hemoclips were applied at the two fistulous openings at the lower end of oesophagus successfully and the right sided ICD was removed that same day. The patient was shifted to general ward and was discharged 3 days later.

He came back after a week for “checking on us” and is doing absolutely fine.

#### DISCUSSION

Foreign body oesophagus is a not so common but not so rare either presentation in the emergency care department. It is usually a common occurrence in paediatric age group and such a presentation in adults is not a very common sight to

see and that too a foreign body that has been lodged inside in such a way that it ended up perforating the walls of oesophagus and led to pyothorax. [4] Also, one very minute but a very important stressing point is the need to be prepared for a difficult intubation at all times with all the necessary equipment.

We would like to bring a few points .

- First things first. Always start examining the patient from the basics- a proper history taking deserves a special place (at the top of the list) in the examination of a patient. It holds so many important hidden clues that can guide us to a proper diagnosis and start appropriate treatment.

This holds true even so in times when the patient is a chronic alcoholic presenting after an episode of binge drinking. Such patients are in an inebriated condition and so are not in a position to give a proper detailed history. Patient’s attendants should be turned to in these cases.

- A presentation of dyspnoea is not always due to a cardiac or a respiratory cause (as mentioned in this article). Further investigations must be carried out to evaluate the patient in detail and treat accordingly.
- Foreign body oesophagus – the definitive investigation modality usually done is a Computed Tomography scan. I would like to bring to notice that investigations like a USG chest and/or UGIE can be equally informative. Also to be noted is that UGIE can not only be helpful in a diagnostic manner but also can help therapeutically in disimpaction and removal of the foreign body in the same setting. Unnecessary radiation exposure is also avoided if we try to bypass CT

Foreign body oesophagus when left long standing may lead to the development of a tracheo-oesophageal fistula which might be a life-threatening condition.<sup>[5]</sup>

#### CONCLUSION

Increased susceptibility to respiratory infection and aspiration pneumonitis leading to ARDS are a known fact of alcoholics, but thorough evaluation of the digestive tract for any associated injuries caused by protracted vomiting should be done in all cases of alcoholics following binge drinking presenting with respiratory failure.

Also, not all cases presenting with dyspnoea and a lung patch on chest x-ray are necessarily Pneumonia or Pulmonary ThromboEmbolism

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