



## What have you eaten today?

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### Abstract:

Foreign bodies in air and food passages are the sixth most common cause of accidental death in United States. Although foreign body ingestion is common in pediatric population, its occurrence is rare in adults except in edentulous, intoxicated, psychiatric or patients with esophageal abnormality. Sharp foreign bodies in esophagus prove to be fatal unless intervened by timely and experienced intervention. We report an interesting case of an eight day old foreign body (open safety pin) perforating the esophagus which was successfully removed by rigid esophagoscopy thus avoiding invasive surgery.

KEY WORD: Foreign Body Esophagus, Rigid Esophagoscopy, Perforation Esophagus.

### INTRODUCTION:

The estimated annual incidence of foreign body ingestion in the USA is estimated 120 per million, with approximately 1.500 deaths reported each

year.(1) Adults with retained esophageal foreign bodies for less than 24 hours present with gastrointestinal symptoms dysphagia, drooling, vomiting, gagging, anorexia. Respiratory symptoms of cough, stridor, fever, chest pain, wheezing, pneumonia and hemoptysis occur in cases of foreign bodies retained for weeks to months. Patients may also present with acute respiratory distress, choking and cyanosis.

Sharp foreign bodies retained for more than 24hours carries risk of impending esophageal perforation, bronchoesophageal fistula, mediastinal abscess formation and airway compromise.(2) Since the esophagus is a passive inadaptible organ, its peristalsis is not strong enough to prevent retention of foreign objects. Hence esophageal perforation is more likely than rest of gastrointestinal tract. Also mucosal erosions, abrasion, scarring, perforation and foreign body migration may lead to fatal mediastinitis, pneumothorax, pneumomediastinum, pneumonia or peritonitis. Migration into the aorta may lead to aortoenteric fistula with horrific complications and morbidity.

#### Case Report:

A 55 year male patient presented to our casualty with symptoms of epigastric pain since 8 days, which aggravated on swallowing food and was severe over last 3 days. Patient complained of pain radiating to the back and fever since 2 days. He gave no history of ingestion of foreign body or nonvegetarian diet or use of dentures or any associated comorbid condition.

On examination, patient was conscious, oriented to time and place but febrile and epigastric tenderness elicited. A chest x-ray revealed an open safety pin inverted at T8-9 vertebral level.

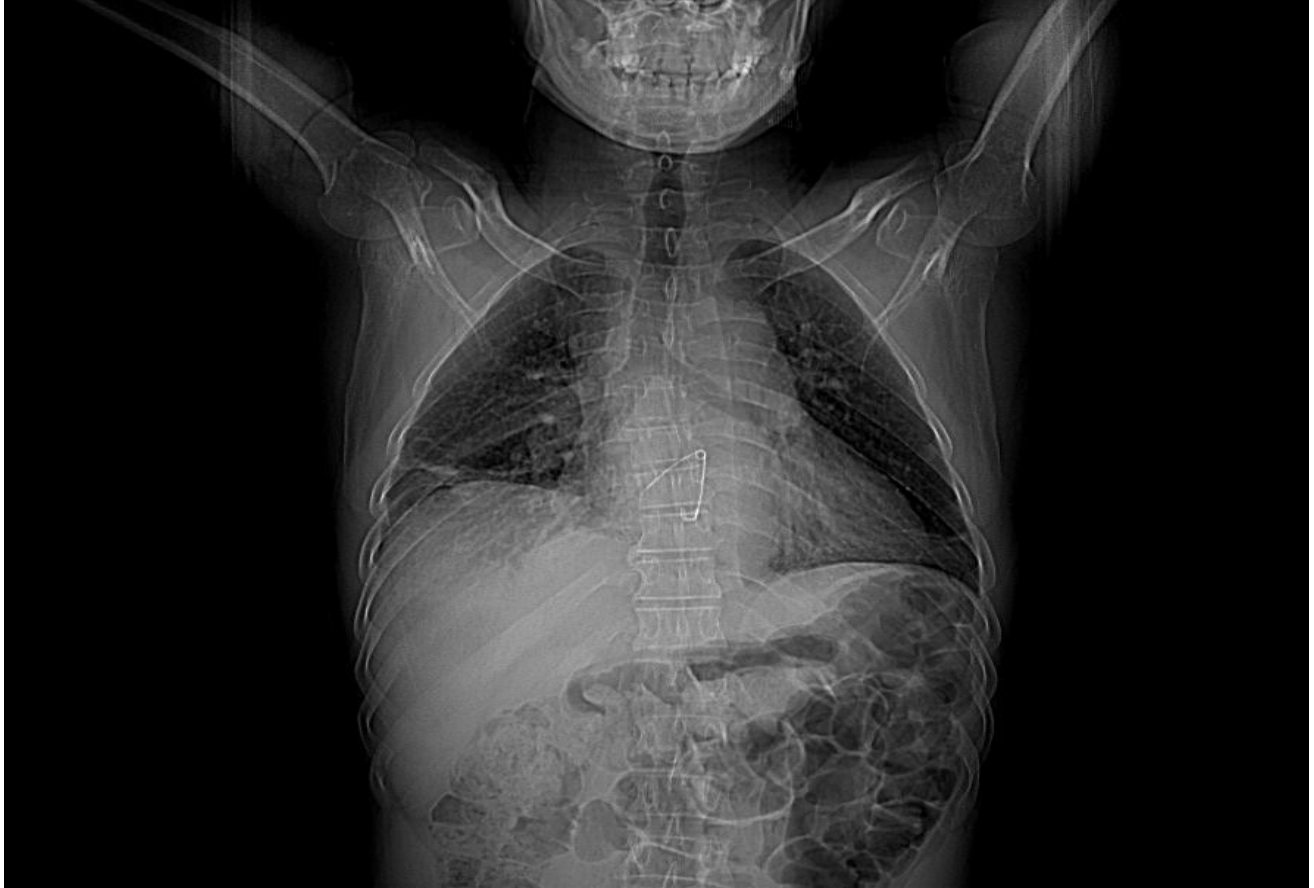


Fig 1.Plain X-ray chest PA view showing radio opaque foreign body-open safety pin in esophagus.

Blood investigation showed leucocytosis with other parameters normal. Since the symptoms of the patient were suggestive of esophageal perforation a confirmatory CT was done which showed perforation of right lateral wall of esophagus with injury to mediastinal pleura and a loculated collection along mediastinal aspect and right oblique fissure. Consolidatory changes of both lower lobes suggestive of aspiration were also seen.

Patient was started on parenteral antibiotics and open safety pin maneuvered through rigid esophagoscope and removed atraumatically and was followed by ryles tube insertion. Postoperative period was uneventful and patient was continued on parenteral antibiotics and RT feeds started after 4 hours. As the patient continued to be febrile on the second postop day and persistent epigatric pain, fluoroscopic guided gastrograffin study

was done and there was no significant contrast leak. Ultrasound chest showed no new findings compared to the preoperative CT scan.

He was continued on the same medications, and by the 4<sup>th</sup> postoperative day patient was afebrile & symptomatically better. However auscultation of respiratory system showed decreased breath sounds right side. Repeat CT scan revealed increased size of the effusion and resolution of consolidatory changes. A cardiothoracic opinion was taken for the same. However it was opined that antibiotics be continued and no surgical drainage was required.

By the 7<sup>th</sup> postoperative day auscultation of chest showed bilateral equal air entry and repeat USG chest showed decreased size of effusion. Patient was started on clear fluids by 8<sup>th</sup> postop day followed by normal diet. By the 10<sup>th</sup> postop day patient patient was discharged with vitals stable and on normal diet. Followup after a week showed complete resolution.

#### DISCUSSION:

The diagnosis of swallowed esophageal foreign body can be difficult in the absence of any history as physical examination is also generally not rewarding. The main diagnostic technique is the use of appropriate radiographic techniques. CT scan aids in characterizing foreign body, assess the presence and extent of surrounding disease (mediastinitis) and also assess and associated complication that may be encountered during the foreign body removal. (4)

Management of impacted foreign body esophagus is dependant on type of object and site of impaction. Urgent removal of impacted foreign bodies is essential as delay in their removal would produce serious complications. The prognosis of untreated esophageal foreign body is catastrophic due to the high rate of esophageal perforation, fistulisation, pleural emphysema and other complications.<sup>5</sup>

Sharp objects can be removed safely by rigid esophagoscopy however if perforation has already occurred, management of the perforation becomes the primary consideration, with removal of the foreign body dependant on the patient's condition. The tip of the esophagoscope may be used to manipulate the foreign body and effect a more favorable presentation to retract tissue and create forceps space and protect the grasp of the forceps. (5) The sharp end or the entire foreign body itself can be introduced into the lumen of the rigid esophagoscope and removed without any risk of

lacerating the mucosa during extraction .No such protection is possible with flexible esophagoscope.<sup>3</sup>

#### CONCLUSION:

Finally we conclude with others, that preservation of airway is regarded as the most important consideration in perforating esophageal foreign bodies. It is best accomplished by endotracheal intubation and general anesthesia and foreign body removal under direct vision by esophagoscopy. Major complications are to be expected with prolonged or missed impaction of foreign bodies in the esophagus. Prevention, high index of suspicion, and early treatment are important factors that can decrease the possible complications of impacted foreign bodies in the esophagus. The high success rate of esophageal foreign body removal coupled with low failure and perforation suggest that rigid esophagoscopy should be the preferred method even for impacted esophageal foreign body both in case of adults and children.

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