

CASE REPORT

A Non-surgical Management of Delayed Diagnosis of an Oesophageal Perforation due to Ingestion of Okra: A Case Report

Rosmadi Ismail¹, Umami Affah Mahamad², Abdul Aziz Marwan²

¹ Pulmonology Department, Hospital Serdang, Jalan Puchong, 43000 Kajang, Selangor

² Department of Medicine-Based, Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Persiaran MPAJ, Pandan Indah, 55100 Kuala Lumpur, Malaysia

ABSTRACT

Oesophageal perforation is a not uncommon condition, yet it carries a high mortality rate and has been observed as the most grievous trauma to the digestive tract. Common causes include iatrogenic instrumentation, foreign-body swallowing, and physical injury. This report highlighted a case of oesophageal perforation complicated by formation of proximal descending aorta pseudoaneurysm as a result of okra ingestion. The patient was successfully treated with conservative treatment. The possible mechanism of oesophageal rupture, diagnosis, treatment, and other complication will be further discussed.

Keywords: Oesophageal perforation, Foreign body, Lady finger, Nonsurgical management, Pseudoaneurysm

Corresponding Author:

Umami Affah Mahamad, MMed (Int Med)

Email: ummiaffah@usim.edu.my

Tel: +6013-9282206

INTRODUCTION

Oesophageal perforation is considered as one of the most serious injury to the digestive tract. Oesophagus is more vulnerable to injury than the rest of alimentary tract due to its lack of serosal layer, which rich in elastin and collagen fibers that provide stability. Range of perforation severity differ from mild pneumomediastinum to gross injury with free drainage into the pleura. Most cases presented ambiguously, mimicking other pathologies. Surgical treatment is definitive, however conservative treatment may be deployed. Inaccurate diagnosis and delayed treatment resulted significantly in high morbidity and mortality. Oesophageal perforation remains a challenge, with debatable management, and high rate of mortality.

Disseminated sarcoidosis is when the inflammation occurs throughout the systems. Currently there is a debate whether treatment should be escalated in this type of sarcoidosis in cases without symptoms.

CASE REPORT

A 61-year old lady who previously well presented to the Emergency Department after a choking episode of following her attempt to swallow a whole okra. This was accompanied with tearing pain along her throat all the way down to the anterior chest that radiated

to the back. An indirect laryngoscope and a flexible nasolaryngopharyngoscope examination were normal. Chest and cervical x-ray were normal with no foreign body seen, and she was discharged with painkiller. However, the pain slowly worsened and a week later, she came again to the Emergency Department. The pain evolved into pleuritic in nature associated with shortness of breath.

She was febrile (37.8°C) with bronchial breath sound noted over her right lower zone. She had mild leukocytosis ($12.3 \times 10^3/\text{ml}$) and her chest radiograph showed mild right pleural effusion with no evidence of pneumomediastinum [Figure 1]. Despite antibiotic, she continued to have a temperature and her pain worsened. A thorax computer tomography (CT) scan was done revealing a collection with air pockets over the left para-oesophageal / para-aortic region (5.3 cm x 4.4 cm x 3.2 cm) with rim-enhancement [Figure 2]. A

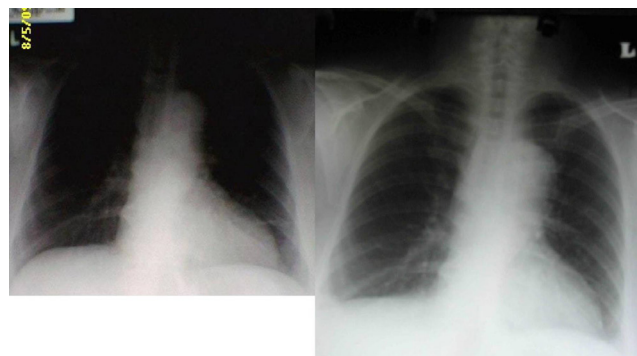


Figure 1: Serial CXR taken 1 week apart. CXR on the left taken on the same day foreign body ingestion and CXR on the right taken one week later showing bilateral pleural effusion.

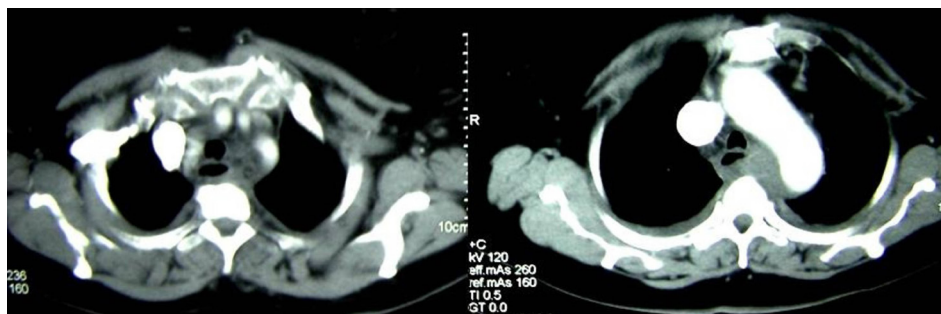


Figure 2: Axial cut of CT thorax on mediastinal window. Abscess with pneumomediastinum in pockets in between left para-oesophageal and left para-aortic region in the upper posterior mediastinum.

pseudoaneurysm was noted over proximal descending aorta adjacent to the collection (1.3cm x1.2cm). The oesophagus was displaced, and no contrast extravasation observed. There was also right middle lobe consolidation associated with simple pleural effusion.

A delayed diagnosis of oesophageal perforation was made, complicated by mediastinal abscess, associated with pseudoaneurysm formation in the descending thoracic aorta.

She was treated conservatively with antibiotic and kept nil by mouth for 10 days. She responded clinically and a barium swallow test done at day 10 showed normal findings with no contrast extravasation. A repeat CT scan later showed residual mediastinal abscess and pleural effusion, with persistent pseudoaneurysm (Figure 3). She completed a 6-week antibiotic course and referred to see cardiothoracic team for subsequent management of her descending aortic pseudoaneurysm.

DISCUSSION

Oesophageal perforation results in mediastinum being contaminated with oesophageal and gastric contents. This could produce chemical burns and superimposed infection, that could lead to severe inflammatory response and sepsis. Iatrogenic oesophageal perforation (instrumentation, dilation, tube passage, paraoesophageal surgery) is the leading cause of oesophageal perforation, accounting to 75% of all cases. The mechanism of oesophageal perforation due to foreign body can be due to direct penetration, pressure, chemical necrosis, or during a foreign body’s endoscopic removal (1).

The commonest site for perforation is at the anatomical oesophageal narrowing. The most common reported

offenders were fish bone or chicken bone. In this case report the perpetrator was believed to be the whole, hard, uncut okra (a vegetable).

The diagnosis of esophageal perforation is difficult, often miss during early presentation and often delayed, as in the case reported here. The presentations were vague and frequently mimic other disorders such as angina pectoris, pancreatitis, lung abscess, pericarditis, and pneumonia (2). A careful and through history with low suspicion threshold is required to establish a correct diagnosis without delay.

Contrast oesophagography remains the standard in diagnosis of esophageal perforation. More crucially, thorax CT scan is the next best tool to diagnose esophageal perforation, and particularly useful when there are small perforations, or when the patient is unable to perform contrast oesophagography. The most classical manifestation in thorax CT scan is pneumomediastinum (3).

Vascular injury secondary to esophageal perforation are either by direct trauma to the vessel secondary to migrating foreign body, or as a result of mediastinal infection leading to abscess formation and causing pseudoaneurysm of the aorta by necrosis of aortic wall (4). The latter is more subtle and typically a late presentation of esophageal injury, as in this case. Oesophageal perforation is seen as a surgical case, however not all requiring surgical intervention. There are established criteriae for operative vs non-operative management for esophageal perforation (5), however in this case, the presence of pseudoaneurysm was considered not fit for any surgical or endovascular intervention, hence the conservative approach.

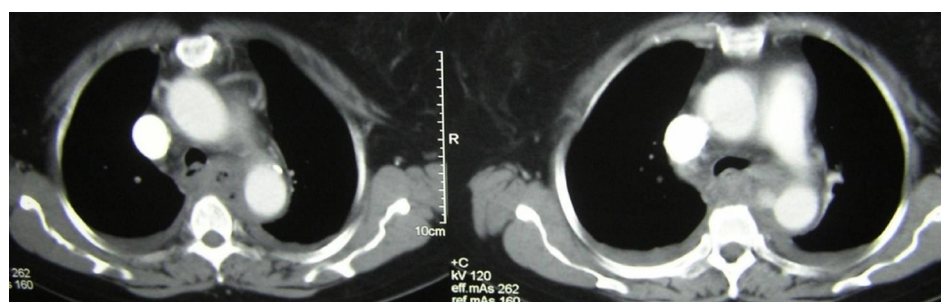


Figure 3: Axial cut of CT thorax on mediastinal window. Pseudoaneurysm (red arrowhead) at the proximal part of the descending aorta in the region of the abscess collection

CONCLUSION

Timely diagnosis of oesophageal perforation remained challenging. The high degree of suspicion accompanied by good history taking and physical examination needed for prompt and accurate diagnosis. The negative chest radiograph cannot be used to rule out perforation as radiolucent foreign body and small pneumomediastinum will be most likely missed. In patient with delayed presentation, hemodynamically stable, and contained abscess in the mediastinum can be treated conservatively even in the presence of early systemic inflammatory response.

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