



Surgical Treatment of Acute Mediastinitis Due to Fish Bone

Balık Kılçığına Bağlı Gelişen Akut Mediastinitin Cerrahi Tedavisi

Acute Mediastinitis

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Öz

Akut mediastinit ciddi bir durumdur ve çabuk tedavi edilmelidir. 66 yaşında kadın hasta ateş ve konfüzyonla acil servise başvurdu. Öyküsünde 11 gün önce balık yedikten sonra öksürdüğü ve hastaneye başvurmada bir gün önce bir balık kılçığının ağzına geri geldiği öğrenildi. Toraks bilgisayarlı tomografi(BT) görüntülemesinde mediastinal alanlarda hava ve yüksek dansiteli sıvı koleksiyonları mevcuttu. Mediastinit tanısı ile hastaneye yatırıldı. Operasyon öncesinde özofagusu incelemek için endoskopi yapıldı ve özofagusta küçük bir nekrotize alan görüldü. Preoperatif hazırlık yapıldıktan sonra hasta ameliyata alındı ve abse drene edildi. Postoperatif 35.günde yoğun bir tedaviden sonra taburcu edildi.

Anahtar Kelimeler

Mediastinit; Kılçık; Cerrahi Tedavi

Abstract

Acute mediastinitis is a serious condition that needs to be treated quickly. A 66-year-old female patient was admitted to the emergency department with fever and confusion. In her medical history she said that she coughed after eating fish 11 days earlier and a fish bone returned to her mouth one day before the admission to hospital. Her thorax CT scan showed air and high-density liquid collections in the mediastinal compartments. She was hospitalized with a diagnosis of mediastinitis. An endoscopy performed before the operation to examine the esophagus revealed a small necrotized area. The patient underwent surgery and the abscess was debrided after preoperative preparation. She was discharged on the postoperative 35th day after an intensive course of treatment.

Keywords

Mediastinitis; Fish Bone; Surgical Treatment

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Introduction

Ingestion of a foreign body into the esophagus is common in children but rarely seen in adults. Acute mediastinitis due to esophageal foreign bodies is a life-threatening condition with a mortality of 17-25% [1,2]. Early diagnosis and treatment is life-saving for patients. Medical and surgical treatment may be applied. Patients usually refer to hospital with fever, tachycardia, and chest pain, and blood tests show infection associated with an abscess. Computerized tomography (CT) should be used when mediastinitis is clinically suspected.

Case Report

A 66-year-old female patient was admitted to the emergency department with fever and confusion. In her history she said she coughed after eating fish 11 days earlier. She had been admitted to hospital two times before. A laryngoscopy was performed but no foreign body was seen. A fish bone returned to her mouth one day before this admission to hospital. Physical examination noted decreased breath sounds on the right side. Laboratory results were as follows: white blood cell count 23,700/mm3 (reference: 4,000-10,000), neutrophil dominance 85% (reference: 37-73), hemoglobin 9.6g/dL (reference:12.1-17.2), C-reactive protein (CRP) >160mg/dL (reference: 0-10), erythrocyte sedimentation rate (ESR) 28mm/h. X-ray revealed air-fluid levels at the mediastinum (Figure 1) and a thorax CT scan showed air and high density liquid collections in mediastinal compartments (Figure 2). After the evaluation of these findings the patient was hospitalized with a diagnosis of mediastinitis, oral feeding was discontinued, and sulbactam/cefoperazone sodium was begun before surgery. Endoscopy was performed to examine the esophagus and a 2 mm necrotized area was seen at 15 cm from incisor; no foreign body was seen in the esophagus. Posterolateral thoracotomy was performed through the 4th intercostal space and the lung was adherent to the chest wall on examination. An abscess located in the posterior mediastinum was drained between superior of vena azygos and inferior pulmonary artery. Isotonic saline with antibiotics was used for the thoracic lavage. A Foley catheter was placed in the space remaining after removal of the posterior mediastinum abscess (Figure 3). We used effective antibiotics and antifungal drugs



Figure 1. X-ray revealed air-fluid levels at mediastinum

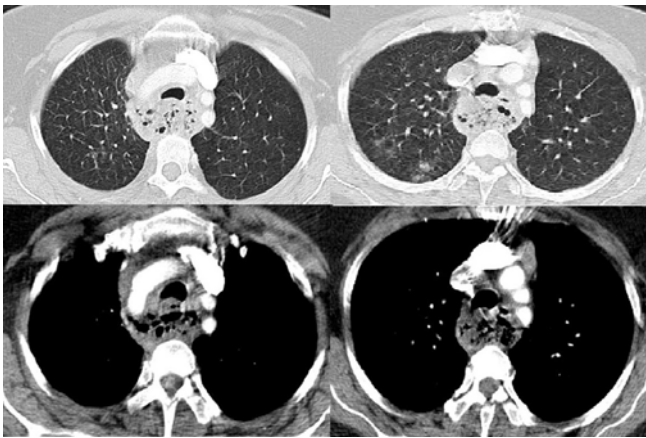


Figure 2. Thorax CT scan showed air and high-density liquid collections in mediastinal compartments.

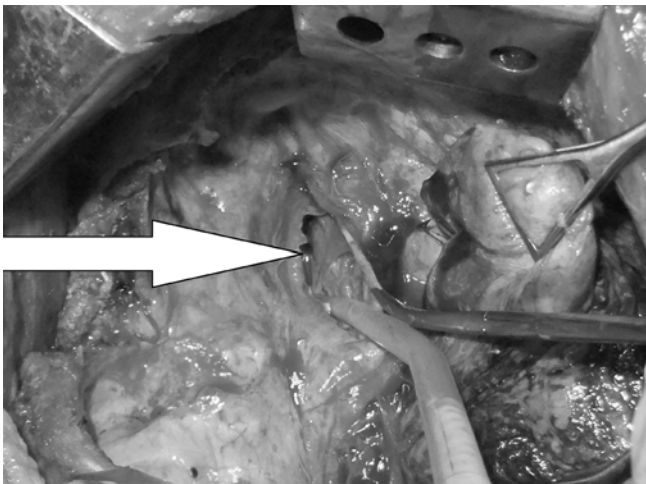


Figure 3. Foley catheter placed into pouch.

in the thoracic lavage for the microbiological culture. Surgery wasn't planned for the esophagus because the perforated area in the esophagus was too small for surgery and healed spontaneously after the fish bone was ejected. Atrial fibrillation after the surgery, probably unrelated to the operation, was treated with metoprolol. Total parenteral nutrition began on the second day and the necrotized area was fully healed on the re-evaluating endoscopy at the 25th day. Oral feeding started after the endoscopy. The patient was discharged on the 35th day and she was healthy at the 6 month follow-up.

Discussion

Swallowing of foreign bodies is common throughout people's lives, but most of the foreign bodies are removed through the stool without causing any problems. An endoscopic or surgical removal is required in only 10–20% of the cases [5]. Pointed materials such as chicken bones, fish bones, and toothpicks most often cause gastrointestinal system perforation [3]. Swallowed fish bones are the most common cause of intestinal perforation associated with foreign bodies in Hong Kong [4] because of their pointed sharp tips and long bodies [4]. Because most of the fish bones are invisible on x-ray due to their size, clinical history should be investigated in detail. Only 32% of ingested fishbones can be identified radiographically [8] Many different imaging techniques can be used for foreign bodies. When there is clinical suspicion of a foreign body, bi-directional x-ray images should first be taken along with a thorax CT scan

if necessary. Metallic foreign bodies can be seen easily on x-ray. Air and high-density liquid collections in mediastinal compartments may be indicative of mediastinitis. There is a long list of serious complications as a consequence of esophageal foreign bodies, including perforation, retropharyngeal abscess, mediastinitis, and fistulas [6]. The mortality rates are as high as 50% as a result of subsequent intrathoracic infection [7]. Conservative or surgery are the treatment modalities for mediastinitis. If there is clinical evidence of infection and collections of liquid in the mediastinal compartment upon scanning, surgery is a good choice for treatment. We recommend thoracic lavage with antibiotics after an effective surgery. Necrotic tissue, bacteria, and their toxins must be drained from the mediastinum. On the other hand, total parenteral nutrition and wide-spectrum antibiotics may be used for the medical treatment of mediastinitis.

Conclusion

Our case emphasizes the danger of esophageal perforations and delayed diagnosis of mediastinitis caused by foreign body ingestion. A thorough history obtained from the patient and timely imaging techniques will lead physicians to the correct diagnosis early. Posterolateral thoracotomy can be a good approach to drain the abscess.

Competing interests

The authors declare that they have no competing interests.

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