Acute oesophageal necrosis – a case report

Ostra martwica przełyku – opis przypadku

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Kardiochirurgia i Torakochirurgia Polska 2010; 7 (1): 44–47

Abstract

A case of a 59-year old woman with subtotal oesophageal necrosis is described. This state developed 9 days after earlier suture of an oesophageal wall rupture due to Boerhaave's syndrome. She underwent three-field subtotal oesophagectomy with full recovery.

Key words: Boerhaave syndrome, oesophageal necrosis, AEN, subtotal oesophagectomy.

Streszczenie

W pracy przedstawiono przypadek 59-letniej chorej z subtotalną martwicą przełyku, która rozwinęła się po 9 dniach od jego wcześniejszego zeszycia z powodu zespołu Boerhaave. Chorą ponownie operowano, wykonując trójpolową resekcję przełyku i uzyskując pełne wyleczenie.

Słowa kluczowe: zespół Boerhaave, martwica przełyku, AEN, subtotalna resekcja przełyku.

Introduction

Gangrenous inflammation is the most serious among all gastrointestinal tract inflammations. Isolated acute oesophageal necrosis (AEN) has a high burden of mortality, reaching 50%, especially when perforation occurs [1-3]. In this paper we present a case of a patient suffering from Boerhaave syndrome, where AEN occurred. She was successfully treated by subtotal oesophagectomy.

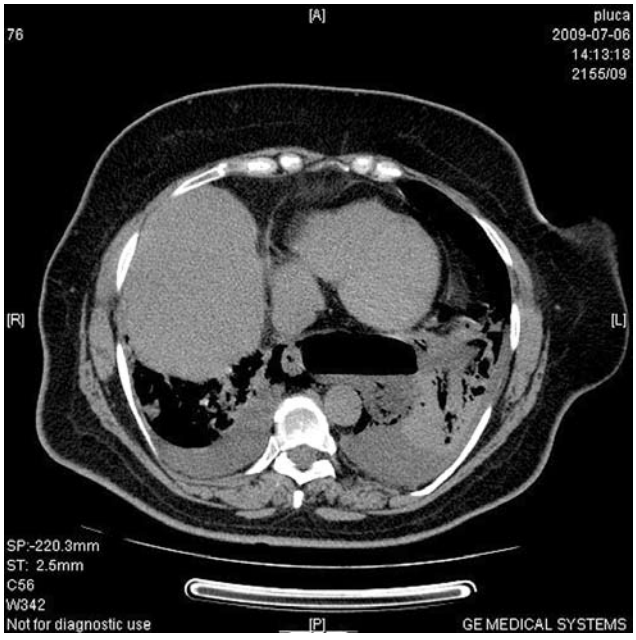

Fig. 1. Chest computed tomography obtained before admittance to the thoracic surgery department

Case presentation

A 59-year old woman (case No. 7808/09) was admitted to our department on 6 July 2009 at night. The initial diagnosis consisted of diaphragmatic oesophageal hiatal hernia, minor left pneumothorax, bilateral hydrothorax confirmed by attached thorax CT (Fig. 1) and additional obesity of class II/III. The patient reported vomiting, diarrhoea, left hemithorax pain and dyspnoea. At the time of admittance her physical status was relatively good. No dyspnoea and no acute infection symptoms were reported. The radiographic oesophageal water-soluble contrast study confirmed para-oesophageal hernia. No pneumothorax was observed (Fig. 2). Despite the reassuring radiological result, the patient was qualified for gastroscopy followed by operative treatment on 7 July 2009. A gastric tube was inserted, broad-spectrum antibiotic therapy implemented, electrolyte equalization and hydration begun. Gastroscopy revealed a 4 cm long linear supracardiac oesophageal rupture. Left thoracotomy showed a fibrinous mediastinal and pleural reaction around the oesophageal rupture mimicking incarcerated stomach. A double layer suture of the rupture was performed followed by broad mediastinal opening, generous flush and drainage of

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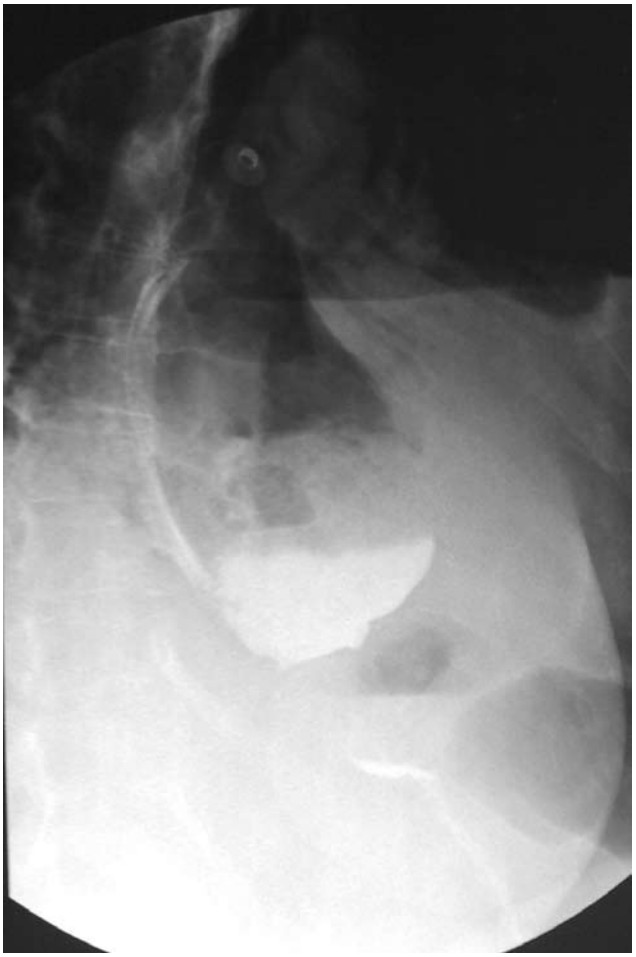

Fig. 2. Water-soluble contrast chest X-ray shows supradiaphragmatic contrast collection

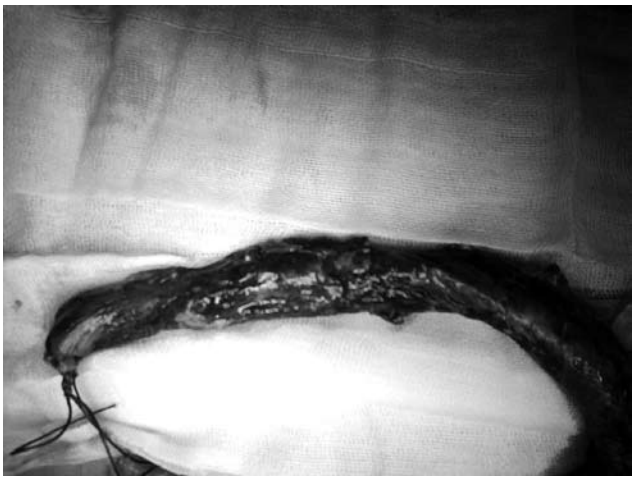

Fig. 3. The specimen of the resected oesophagus shows macroscopic features of complete oesophageal necrosis (spec. No. 13887/09) – necrosis massiva cum suppuratione

the mediastinum and both pleural cavities. The patient was referred to the ICU and later to the thoracic department on the 6th postoperative day (POD). Her mediastinal drainage yielded 50-100 ml of serous fluid daily. She was fed by gastric tube, antibiotic therapy was continued, and peristalsis was present. On POD 7 suppuration of the post-thoracotomy wound was revealed. A radiographic contrast study was planned for the following day, but circulatory and respiratory crisis occurred and the patient was transferred back to the ICU and ventilated by the respirator. Gastroscopy was done on POD 9, after slight improvement of patient status. It revealed oesophageal suture dehiscence and features of an extensive AEN (Fig. 3). Immediate subtotal McKeown oesophagectomy was performed and gastroesophageal anastomosis was done using two linear staplers. Anti-eventration sutures secured the laparotomy approach. Twelve days after the second operation the radiographic contrast study confirmed gastroesophageal anastomosis tightness and the patient was redirected from the ICU to the thoracic surgery department. Twenty-eight days after the second operation the post-thoracotomy wound was resutured and the patient was fully recovered.

Discussion

The treatment of oesophageal perforation accompanied by mediastinitis and hydrothorax consists of double layer reconstruction of the rupture, with extensive drainage of the mediastinum and pleura performed early, if possible within 24 hrs. Successful oesophagectomy under these circumstances was also described [4–7]. Late operative treatment worsens the prognosis dramatically and limits treatment possibilities to drainage and gastric or intestinal alimentation [7, 8]. Isolated or concomitant necrosis of the entire oesophageal wall is a similarly rare indication for oesophagectomy with respect to the limitations mentioned above [9, 10]. Here the secondary development of AEN with recurrent perforation occurred after the primary oesophageal reconstruction in the postoperative course, despite the effective mediastinal drainage, stomach drainage by the gastric tube and antibiotic treatment. This situation prevented transition of the mediastinitis into the irreversible phase and enabled oesophagectomy within a favourable period, resulting in complete recovery.

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