

## Thoracoscopic repair of a transmural rupture of the oesophagus (Boerhaave's syndrome)

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**Transmural spontaneous oesophageal rupture was first described in 1724 by Boerhaave and in 1946 Barrett<sup>1</sup> was the first to describe successful surgical treatment for this condition. The advent of minimal access surgery has seen a minimally invasive approach to many well recognized surgical conditions and we report a thoracoscopic repair of a spontaneously ruptured oesophagus.**

### CASE REPORT

A 77-year-old man was admitted through Accident and Emergency having vomited solid food 12 h previously. He complained of progressively worsening retrosternal chest pain and nausea. On examination he had a tachycardia of 130 and a blood pressure of 90/60. Subcutaneous emphysema was palpable around his neck. Abdominal examination revealed epigastric tenderness.

Urgent resuscitation was instigated with intravenous colloids and urinary catheterization. A chest radiograph revealed a small left pneumothorax, a collection at the left lung base, a mediastinum shifted to the right, and mediastinal and subcutaneous emphysema. A contrast swallow confirmed a left sided rupture of the oesophagus and communication with the left pleural cavity.

After resuscitation a general anaesthetic with a double lumen was administered. The patient was positioned supine with the left arm outstretched. Video-thoracoscopy was performed with a 10mm end-viewing endoscope. After collapse of the lung, the thoracoscope was passed through the left chest wall in the mid-axillary line and free fluid with food debris was seen within the pleural cavity. Under direct vision two accessory 5mm ports were positioned in the anterior axillary line. The pleural cavity was irrigated clean

and the inferior pulmonary ligament was divided in order to allow good access to the lower oesophagus. Gentle mobilization confirmed the presence of a ruptured oesophagus and the longitudinal tear was clearly visible. Repair was performed using polyglactin (Vicryl, Ethicon, Edinburgh, Scotland, UK) interrupted intra-corporeal sutures. The pleural cavity was re-irrigated and two chest drains were placed under direct vision before the lung was re-expanded.

The patient made a smooth post-operative recovery, and despite a small leak, required no further surgery. He made a complete recovery and remains well 18 months after presentation.

### DISCUSSION

Spontaneous oesophageal perforation is a difficult management problem. Early diagnosis remains the key to a successful outcome and the high mortality of the condition is due to a delayed or incorrect diagnosis. There is still controversy about whether the best treatment is conservative or surgical repair. Walker<sup>2</sup> reviewed the management of 14 cases of spontaneous transmural rupture of the oesophagus and concluded that repair should be undertaken in those cases presenting within 24 h.

Mengoli and Klassen<sup>3</sup> were the first to describe nonoperative treatment in cases where an iatrogenic perforation had occurred. White and Morris<sup>4</sup> found iatrogenic perforation to be the most common cause of ruptured oesophagus. They concurred with Walker's<sup>2</sup> conclusion and also found that there was a significantly higher mortality in the cases of oesophageal perforation which were treated more than 24 h after the onset of symptoms, irrespective of the treatment and procedure used.

Advocates of conservative management for Boerhaave's syndrome<sup>5</sup> suggest that the advantages of surgery are not in the restoring of the continuity of the oesophagus but rather in the pleural lavage and in allowing adequate chest drainage. There is a claim that total parenteral nutrition and suitable antibiotics have improved the survival figures for nonoperative management. However, most authors<sup>2,4,6-8</sup> feel that surgical management is the treatment of choice for Boerhaave's syndrome when the condition is recognized early.

Thoracoscopy with irrigation has been described in the management of an oesophageal rupture 4 days after the onset of symptoms<sup>9</sup>. Removal of food debris, the breaking down of loculi with the instrument tip under direct vision and irrigation through the laparoscope outer sheath was described.

We report a case of video-thoracoscopic repair in an early diagnosed Boerhaave's syndrome. The minimal access

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approach negated the requirement of a thoracotomy and allowed us to repair the defect, irrigate the pleural cavity and position the drains accurately. This technique appeared to improve the post-operative pain relief and ventilation.

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## Runway malaria in a British serviceman

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**'Runway malaria' is a clinical entity first described in 1990<sup>1</sup> and refers to a patient who has contracted malaria, in whom the only possible exposure has been when the aircraft in which they were travelling has landed transiently in a malarious zone. We describe such a case in a British Serviceman travelling from the South Atlantic to Germany, who acquired malaria in West Africa.**

### CASE REPORT

A 26-year-old British Serviceman was admitted to a military hospital in Berlin with a 3-day history of general malaise, rigors and fever. He had previously been well and had no medical history of note. On examination he was noted to have splenomegaly. The patient volunteered the fact that he

had been in a tropical country 4 weeks before and had been told to alert doctors to the possibility of malaria should he become ill. Thick and thin blood films revealed scanty trophozoites of *Plasmodium ovale*. He was treated with oral chloroquine and primaquine and made a good clinical recovery. Malaria serology performed acutely gave a titre of 1:20, which had risen to 1:1280 during convalescence 2 months later.

The patient had been stationed in Germany for the previous 4 years and apart from one occasion had not travelled outside of North-West Europe. The 'overseas visit' consisted of a 4-month long posting to the Falkland Islands in the South Atlantic, from which he had returned 3 months earlier. His journey there had been from Germany via the UK, with a refuelling stop at Ascension Island in the South Atlantic (a non-malarious zone). On his return, however, the aircraft had refuelled in Banjul, Gambia in West Africa, staying on the ground for 1 h at night. No passengers were allowed to disembark, but two passenger doors were kept open in accordance with fire regulations. Following this stop no malarial chemoprophylaxis was given, but the passengers were advised to seek medical assistance should they develop a feverish illness on return home.

### DISCUSSION

'Airport malaria' is a well reported event<sup>2-4</sup> and refers to patients who acquire malaria despite not visiting a malarious area. The presumed mode of acquisition is from the bite of an infective mosquito that has travelled on an aircraft to a non-malarious country.

'Runway malaria' is probably uncommon and only two previous cases have been reported in the literature<sup>1,5</sup>. In Western countries malaria remains a serious and sufficiently

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