Spontaneous rupture of the oesophagus (Boerhaave's syndrome): conservative versus surgical management

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Spontaneous rupture of the oesophagus was first described by Herman Boerhaave[1] in 1724 while Barrett reported the first successful surgical repair in 1946[2]. Despite this long experience, Boerhaave's syndrome remains difficult to diagnose early - it is a rare syndrome, seldom presenting with the classical triad of vomiting, chest pain, and subcutaneous emphysema[3]. Delay in diagnosis leads to the high reported overall mortality[4]. We report two such cases, diagnosed early, and treated successfully; one by operation, and the other conservatively.

Case reports

Case 1

A 75-year-old man presented to his general practitioner with vomiting and retrosternal pain. He was sent to the Accident & Emergency Department with a diagnosis of myocardial infarction but by then had developed signs of an upper abdominal catastrophe necessitating surgical referral. At this stage he was hypotensive with peripheral circulatory shutdown and also had hoarseness and subcutaneous emphysema in the neck. His chest radiograph demonstrated subcutaneous emphysema and pneumomediastinum. A gastrografin swallow (Figure 1), confirmed a large tear of the mid-thoracic oesophagus with extensive pooling of contrast in the mediastinum. In view of the short history (6 h), signs of shock and the demonstration of a large leak it was decided to proceed to surgical repair.

At emergency right thoracotomy a longitudinal tear (10 cm mucosa and 13 cm muscle) was found anterolaterally in the mid-oesophagus. This was repaired, after debridement, with interrupted PDS sutures over a nasogastric tube (without reinforcement flap). The mediastinum was thoroughly irrigated and the chest closed with intercostal drainage. The patient recovered uneventfully and a gastrografin swallow on the 6th day was normal. He was discharged on the 12th day, and was asymptomatic at 6 months.

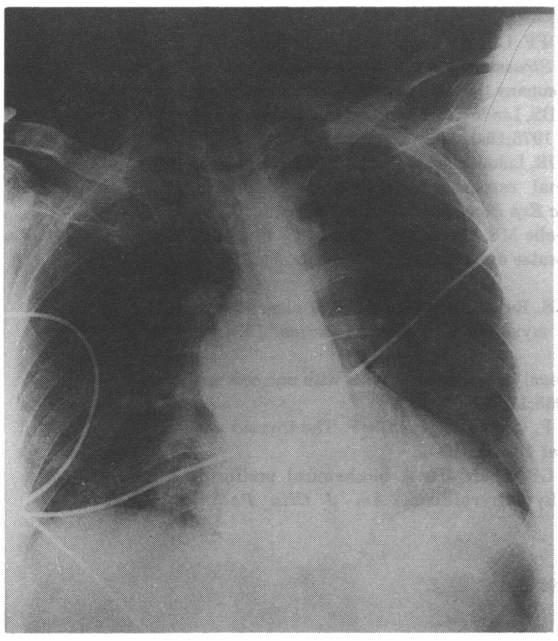

Figure 1. Case 1: Gastrografin swallow demonstrating leakage of contrast which was contained within the mediastinum

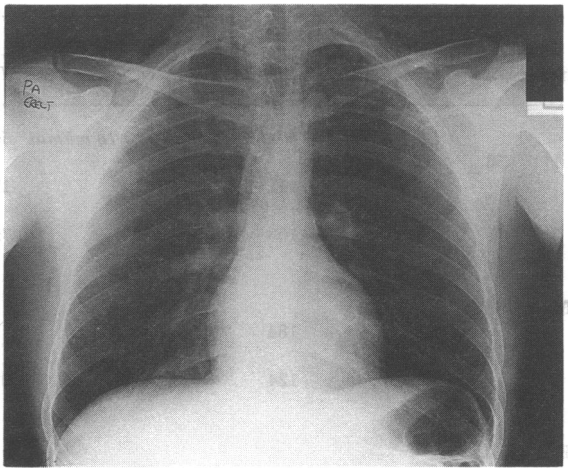

Figure 2. Case 2: Chest radiograph demonstrating air in cervical tissues

Case 2

A 25-year-old man experienced retrosternal pain and dysphagia 12 hours following vomiting. When examined in the Accident & Emergency Department he was noted to be apyrexial and normotensive with surgical emphysema in his neck, confirmed on a chest radiograph (Figure 2). An urgent gastrografin swallow showed a very small leak at the level of the aortic arch, while the rest of the oesophagus was normal.

Considering the longer history and a small oesophageal tear, in the absence of systemic upset, it was felt that conservative management was appropriate. Within 24 h of the onset of his symptoms, a regimen of oral fluid and food exclusion, nasogastric aspiration, and intravenous antibiotics was commenced in association with careful clinical and radiographic monitoring. A gastrografin swallow on the 6th day was normal. He was discharged home on the 8th day eating normally, afebrile and with a normal chest radiograph. At 2 month follow-up he remains asymptomatic.

Discussion

Early diagnosis is made difficult by the rarity of the condition and by the frequent absence of the classical triad of vomiting, chest pain, and surgical emphysema[3]. Differentiating a ruptured oesophagus from myocardial infarction or an upper abdominal catastrophe can be very difficult in the absence of surgical emphysema, as illustrated by the first case. This case was unusual in that it involved the mid-oesophagus, anteriorly, and without perforation into either pleural space. Usually, perforations occur in the lower oesophagus, and into the left pleural cavity[5]. Previous reports[6] suggest that the mucosal tear is longer than the muscular, but here the reverse was true.

The second case illustrates the alternative conservative management applicable to a small leak, contained within the mediastinum and in the absence of signs of sepsis or significant symptoms. However, when the conservative approach is adopted, complications such as empyema and persisting fistula may still require aggressive surgery[3].

Delayed treatment (whether surgical or conservative) is associated with a high mortality[7]. Mortality rates of 20% when repaired within 24 h of perforation, and 50% after 24 h have been reported[8]. Some workers[4,5] have reported leak rates in the region of 20-40% with simple repair and have therefore recommended reinforcement procedures. This is probably a reflection of the friable tissues found when surgery is delayed.

In conclusion, we feel that a substantial tear, with signs of circulatory collapse and diagnosed within 24 h, should be

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treated surgically, whereas a small, contained rent without significant systemic upset can be managed conservatively.

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Letters to the Editor

Preference is given to letters commenting on contributions recently published in the JRSM. *They should not exceed* **300 words** *and should be* **typed double-spaced.**

Family therapy for anorexia nervosa - why not?

I read with interest the review by Hodes *et al.* on family therapy for anorexia nervosa in adolescence (June 1991 *JRSM*, p 359).

Psychiatrists have long taken comfort in categorizing psychiatric disorders into two broad categories of neurosis and psychosis. Psychologists, psychotherapists and behaviourists have found their treatments beneficial for neurotics, while in psychotic patients where the reality testing itself is impaired, pharmacological manoeuvres have taken precedence over the psychological modes of treatment. Anorexia nervosa is a queer psychiatric disorder which lies on the borderline of neurosis and psychosis. Typically a young adolescent girl with intact reality testing but with impaired social and occupational functioning (is she a neurotic?) has this delusion that she is fat (she is a psychotic!).

Unfortunately for the patients of anorexia nervosa till date we have not been able to bounce upon some wonder drug (as in schizophrenia and affective disorder) which would dramatically alleviate the symptoms. Until that time we will not be able to leap into any convincing hypotheses about the aetiology of the disorder (even though such hypothesis tells us less about the disorder and more about why the particular drug works).

This lacuna in our knowledge gives scope to all kinds of therapies and therapists to target their forces on to this disorder depending upon their own theoretical orientation. Psychoanalysts, psychoanalytically oriented psychotherapists, behavioural psychotherapists and pharmacologists have tried their hands without producing convincing evidence of success. It is only appropriate that now the family therapists contribute their part.

Some workers (including family therapists), work on the conflict hypothesis, anorexia nervosa being a pathological solution to the conflict. Others work on the biological hypothesis, the distortion of the body image, according to them, being the result of neurobiological disturbance. Although it is unfortunate that we have to try various treatments blind-folded and if the treatment is successful hypothesize the aetiology only because the treatment worked, probably with the present state of knowledge it is the only feasible approach.

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Spontaneous adverse drug reaction reports

I read with interest the report on spontaneous adverse drug reaction reporting versus event monitoring by Fletcher (June 1991 *JRSM*, p 341). Although I am in complete agreement that both systems are of great use in assessing adverse reactions to marketed products I must take issue with the interpretation placed on some of the events in the discussion.

I consider it unreasonable to compare clinical event rates for a bronchodilator drug with a non-steroidal anti-inflammatory drug without taking account of the conditions of the patients in which these two drugs are prescribed. Patients with asthma are often atopic, and co-existing eczema prior to any treatment is frequent. Thus the fact that the event monitoring scheme found a relative excess of eczema complaints in patients treated with a bronchodilator may well be quite independent of the drug's prescription. It is precisely in such a case that the spontaneous reporting system is superior since doctors do not report upon pre-existing conditions which may wax and wane coincidentally with a drugs prescription. Thus in this case one could equally claim that the event monitoring system has given a totally misleading impression due to the fact that the patient populations being treated are quite different. I think it is important therefore that when one compares drugs by event monitoring systems it should be drugs within a therapeutic class rather than between classes. It is precisely for these reasons that adverse events should be examined in the light of as much medical history as possible, as opposed to isolated incidence figures.

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