

## Case 48

# Another patient with difficulty swallowing

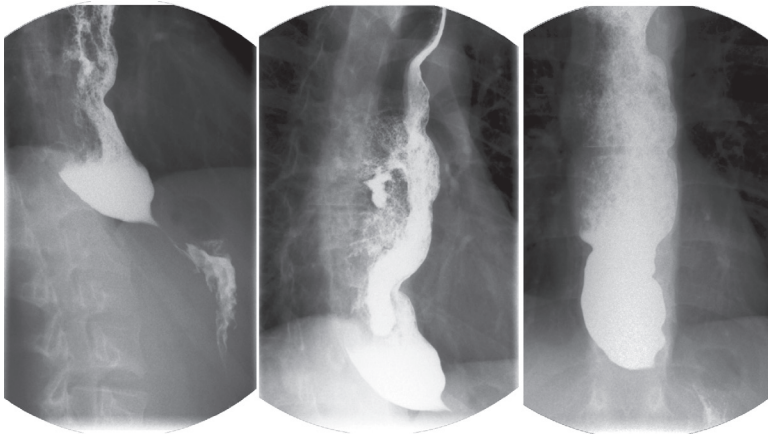


Figure 48.1

A married canteen waitress aged 55 years consulted her family practitioner with a history of difficulty in swallowing. This she had noticed for the last 3 or 4 years. Food seemed to stick behind the sternum, but as there was no pain and it was not very severe, she put this down to 'indigestion'. However, it was now a real nuisance and she was worried that something serious was going on. She said that the difficulty was especially marked if she swallowed food she had not chewed well and that, although at first fluids gave no problem, she was now having some difficulty swallowing her drinks. She had not lost her appetite and, as far as she could tell, her weight was steady and she was otherwise healthy and active. She had had two normal pregnancies and no serious previous illnesses. She pointed to the middle of her sternum as the location of her problem.

When her doctor examined her, she was a healthy woman of average build, with no evidence of weight loss or clinical anaemia. There were no masses to feel in the abdomen or the neck. She was given an urgent appointment to the surgical outpatient clinic. The surgeon confirmed the GP's history and clinical findings and ordered a full blood count, which was within normal limits, and a barium swallow X-ray. Typical films of the series are shown in Fig. 48.1.

### Describe what the X-ray shows, and what is your diagnosis?

There is gross dilatation and tortuosity of the oesophagus, which leads to a narrowed segment at its lower end. As well as barium, the oesophagus contains a good deal of solid food debris, shown by the filling defects in



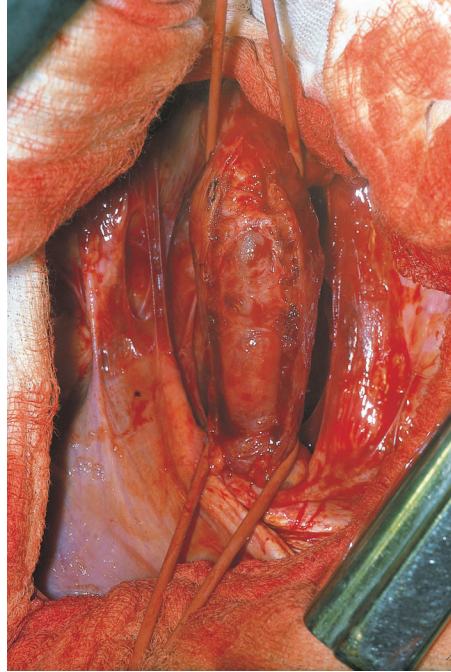
**Figure 48.2** Chest X-ray illustrating a grossly dilated oesophagus.

the pool of barium. These appearances are typical of achalasia of the oesophagus.

### What is the aetiology of this condition?

There is neuromuscular failure of relaxation of the lower end of the oesophagus with incoordination of peristalsis of the oesophageal muscles. This leads to progressive dilatation, hypertrophy and tortuosity of the oesophagus above the cardia. Oesophageal motility studies show simultaneous, low amplitude contractions of the oesophagus with impaired relaxation of the lower oesophageal sphincter. Histology shows loss of myenteric plexus nerve cells. The aetiology of this condition remains unknown. It may commence at any age, but particularly in the thirties and forties, and is commoner in women. It is indistinguishable from Chagas' disease,\* which occurs in South America and is caused by *Trypanosoma cruzi*; this parasite destroys the intermuscular ganglion cells of the oesophagus.

\*Carlos Chagas (1879–1934), Professor of tropical medicine, Rio de Janeiro, Brazil.



**Figure 48.3** Heller's operation.

### What may a plain X-ray of the chest show in an advanced case, allowing the diagnosis to be made on this simple investigation alone?

The grossly dilated oesophagus, full of food debris, may produce the appearance of a mediastinal mass and there may be evidence of pneumonitis from repeated aspiration of oesophageal contents. This plain postero-anterior X-ray of the chest shows just such a case (Fig. 48.2): the patient was an old gentleman of 80, whose main complaint was of repeated attacks of 'bronchitis' – cough, fever and purulent sputum. Only on direct questioning did he admit to many years of difficulty in swallowing.

### This patient referred the site of her dysphagia to the middle of her chest, yet the obstruction was at the oesophago-gastric junction – was this unusual?

Patients with an obstruction in the lower pharynx or cervical part of the oesophagus localize the level of the lesion quite precisely in the neck (vagal innervation). However, the thoracic and abdominal segments of the oesophagus and the cardia have sensory innervation

from autonomic (sympathetic) afferents. Pain from these sites is poorly localized. The majority of patients, as in this woman, localize the obstruction, pain or discomfort rather vaguely to the mid body of the sternum. If you have ever had an attack of 'heartburn' you will have noticed how difficult it is to define the site of the pain.

### How is this condition treated?

Heller's operation† is performed – cardiomyotomy, with the muscle of the lower end of the oesophagus right down

to the cardia split down to the mucosa. This was carried out successfully in the present case and Fig. 48.3 shows the lower oesophagus and cardia held between rubber slings immediately after the muscle wall was divided.

Nowadays the operation is performed thoracoscopically. The same effect may also be achieved by forcible dilatation of the oesophago-gastric junction by means of a hydrostatic bag at endoscopy. Although this avoids open operation, there is a risk of rupture of the oesophagus.

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†Ernst Heller (1877–1964), surgeon, Leipzig, Germany.