Case 55 An acute abdominal emergency

A retired merchant seaman, while enjoying a glass of beer with his friends one evening, suddenly collapsed with extremely severe general abdominal pain. An ambulance was called and he arrived at the local Emergency Department about half an hour after the onset of the pain.

The surgeon on duty took a brief history rapidly. The patient had suffered from episodes of 'indigestion' for many years but never went to the doctor about this, merely dosing himself with proprietary indigestion tablets. These pains were epigastric in location, would come on after meals and might wake him at night. However, this present attack was quite different – very much worse, diffuse over the abdomen and, on direct questioning, he admitted to feeling pain over the right shoulder. He had not vomited but was feeling sick. He was a heavy cigarette smoker and a moderate beer drinker.

On examination, the patient lay absolutely still on the trolley, with his legs drawn up; the slightest movement aggravated the pain. He was pale, clammy and breathing with rapid short breaths. His pulse was 90/min, temperature 37°C and blood pressure 130/70 mmHg.

The abdomen was held rigidly tense, and was uniformly tender; it was silent on auscultation. The normal liver dullness over the lower right chest was replaced by undoubted resonance to percussion.

If you encountered this situation, what would be your clinical diagnosis?

The previous history is very suggestive of a chronic peptic ulcer. The patient now has the classical features of a general peritonitis of sudden onset. Putting the two together makes perforation of a chronic peptic ulcer into the peritoneal cavity the obvious first choice.

An X-ray of the chest and upper abdomen was obtained in the Emergency Department and is shown in Fig. 54.1.

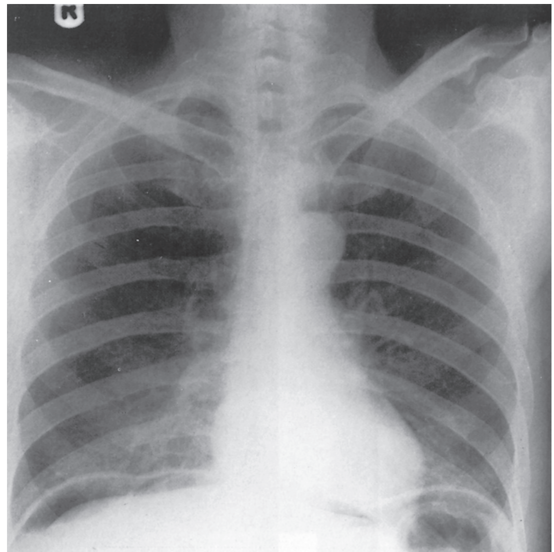

Figure 54.1 X-ray of the chest and upper abdomen.

What does the film demonstrate?

The lung fields are clear. There is obvious free gas under both hemi-diaphragms.

This is a typical finding after perforation of a peptic ulcer, as gastric gas escapes into the peritoneal cavity, but is it a constant finding in this condition?

Radiological evidence of free air on a plain chest X-ray is only present in about 70% of cases, but it is a serious error to discount the clinical diagnosis because of a negative X-ray. CT will confirm free intraperitoneal gas where doubt exists.

The patient complained of pain over the tip of the right shoulder – why so?

This is referred pain via the phrenic nerve (C3, C4 and C5), which supplies the diaphragm, to the corresponding dermatomes. In the majority of cases it is necessary to ask the patient directly about this distribution of the pain. The patient knows there is something seriously wrong inside his belly and often thinks his aching shoulder is irrelevant!

What is the management of this patient?

Reassurance; intravenous opiate, analgesia and antibiotic therapy is commenced together with intravenous fluid replacement. Surgical repair of the perforation is followed by medical therapy.