

# Pneumoperitoneum in a perforated gastric ulcer

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## DESCRIPTION

A 78-year-old woman with a history of peptic ulcer and recent use of non-steroidal anti-inflammatory medication presented to the emergency department with a 3-day history of progressively worsening abdominal distention and pain. She had been seen at the same emergency department on the day before, and was treated symptomatically with intravenous fluids and promethazine and discharged with a presumptive diagnosis of gastroenteritis.

The patient was haemodynamically unstable and improved after resuscitation in the emergency department.

Abdominal examination revealed notable distention, tympany and voluntary guarding with signs of peritonitis.

Plain-film radiographs of the chest, as well as an abdominal x-ray obtained with the patient in a supine position (figures 1 and 2), revealed evidence of a pneumoperitoneum with gas under the infra-diaphragmatic region. The findings were highly suggestive of gastric perforation.

The patient was handed over to the surgical team who gave prophylactic antibiotics. Owing to the patient's instability, an emergency laparotomy was performed and the defect repaired.

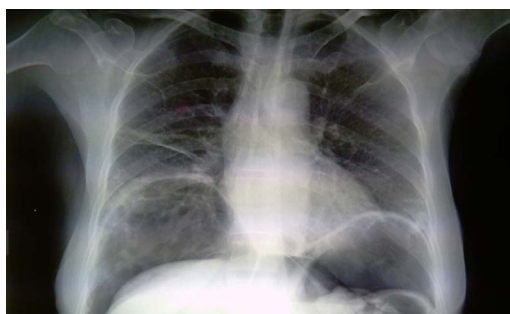
A biopsy of the ulcer revealed it to be a case of peptic ulcer disease.

However, the patient developed severe nosocomial infection with septic shock and died shortly after the surgery.

Peptic ulcer perforation in the older patients can present with atypical symptoms and be associated to increased mortality in this patient population.<sup>1 2</sup>

Death rate after surgery for perforation of peptic ulcer is 3–5 times higher in the elderly (up to 50%). This can be explained not only by the occurrence of concomitant medical diseases but also by difficulties in making the right diagnoses, resulting in a delay >24 h.<sup>3</sup>

A high level of vigilance and early attention to an 'acute abdomen' in the elderly is therefore advocated.<sup>4</sup>



**Figure 1** Supine chest x-ray showing air under the diaphragm.



**Figure 2** Abdominal x-ray showing air under the diaphragm.

## Learning points

- ▶ In the older patients, peptic ulcer perforation is not unusual as a complication of peptic ulcer disease and can have an atypical presentation.
- ▶ A high level of vigilance and early attention to an 'acute abdomen in older patients' are advocated to avoid delay in diagnosis and life-saving intervention.
- ▶ Non-steroidal anti-inflammatory medications must be used with extreme caution in the older age group.

**Competing interests** None.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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