

# Bowel pseudo-obstruction following an acute ST elevation myocardial infarction

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## DESCRIPTION

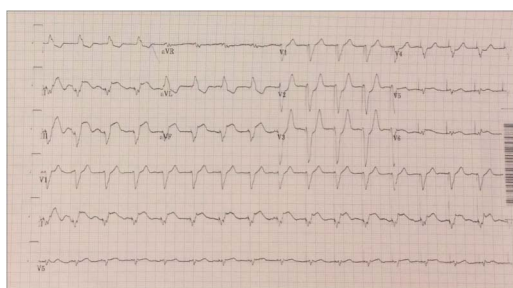
An 84-year-old man was brought to the accident and emergency department, with chest pain. His ECG showed features consistent with an inferior ST elevation myocardial infarction (figure 1). As per guidance,<sup>1</sup> he was loaded with aspirin and prasugrel and thereafter underwent a percutaneous coronary intervention (PCI) to the right coronary artery.

Over the next 3 days, he had increasing abdominal distension, had not opened his bowels, reported nausea and had multiple episodes of non-faeculant vomiting. His observations were stable. On examination, his abdomen was soft,

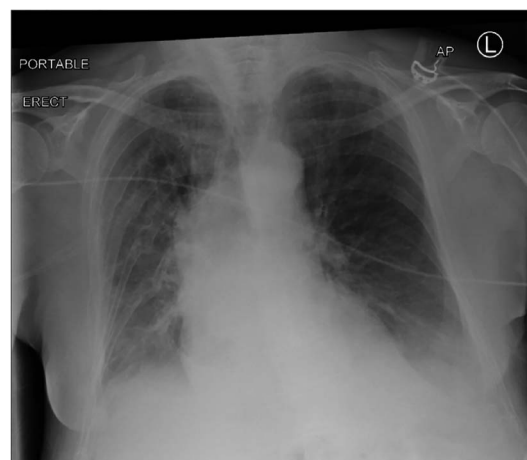
non-tender, distended and tympanic. Bowel sounds were present. His rectum was empty.

An abdominal X-ray showed a dilated stomach and small bowel (figure 2). He had no history of abdominopelvic surgery, his electrolytes were within normal range and he was not taking any culprit medications. An erect chest X-ray ruled out pneumoperitoneum (figure 3). A CT of the abdomen and pelvis was unremarkable for a mechanical obstruction.

The patient was managed conservatively with intravenous fluids and antiemetics, and with a nasogastric tube for decompression.



**Figure 1** ECG on admission showing features consistent with an acute inferior ST elevation myocardial infarction.



**Figure 3** Erect chest X-ray, which ruled out pneumoperitoneum.



**Figure 2** Abdominal X-ray showing a dilated stomach and multiple dilated small bowel loops.



**Figure 4** Repeated abdominal X-ray showing a reduction in the degree of dilation.



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## Learning points

- ▶ Pseudo-obstruction of the small or large bowel is characterised by clinical features of a mechanical obstruction in the absence of a mechanical cause. It is associated with conditions unrelated to direct abdominopelvic intervention, such as non-operative trauma, cardiac disease, infection, renal failure and orthopaedic surgery. Following either of these, abdominal distension can occur over 3–7 days. Imaging reveals the presence of intestinal dilation. Important differentials are mechanical obstruction and toxic megacolon.
- ▶ While the precise mechanism of acute pseudo-obstruction is unknown, autonomic dysfunction to the gut, particularly parasympathetic, is the likely aetiology. The first-line of management is conservative. Neostigmine is indicated in patients who fail 24–48 h of conservative therapy, or in those with severe bowel distension (>12 cm in diameter).
- ▶ While CT scanning helps to exclude a mechanical obstruction, colonoscopy should not be used to rule out obstruction, as the insufflation of air increases the risk of perforation.

Over the next 3 days, his abdominal distension had decreased and he began to open his bowels. A repeated abdominal X-ray showed improvement (figure 4). Enteral nutrition was thereafter reintroduced.

Retrospective data of patients with acute colonic pseudo-obstruction (Ogilvie's syndrome) show an association with cardiac disease and coronary intervention.<sup>2</sup> For unclear reasons, these cause temporary parasympathetic dysfunction to the bowel.<sup>3</sup> Although such an association is not as well established in acute small bowel pseudo-obstruction, a similar aetiology is likely to exist and is important to recognise as a consequence of myocardial infarction and PCI.

**Competing interests** None declared.

**Patient consent** Obtained.

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

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