



## An unusual case of large bowel obstruction

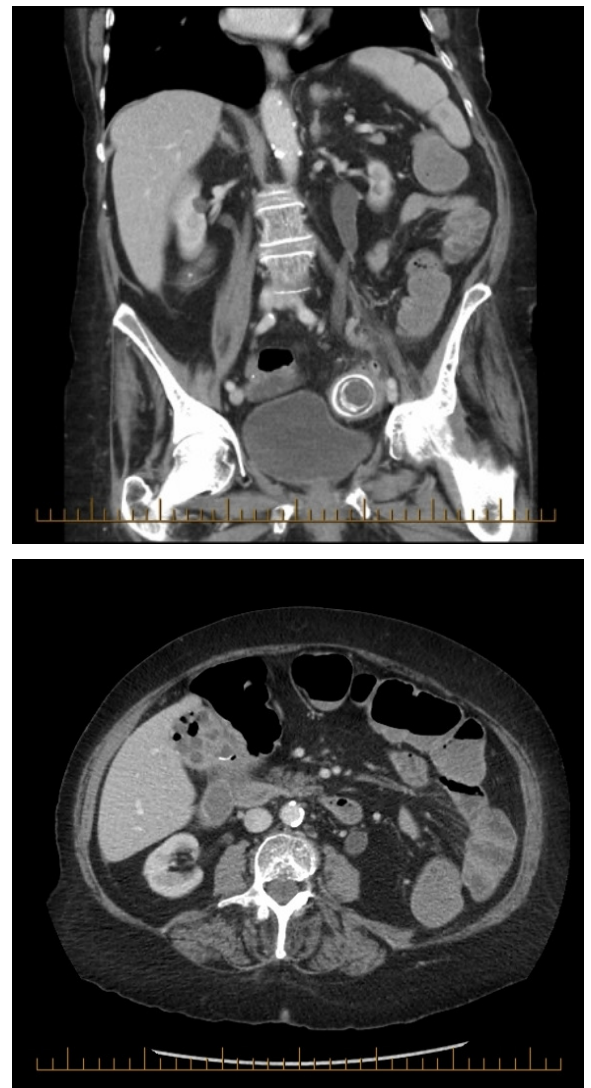
Magdalena M Sakowska, Philip Bagshaw, Tim Eglinton

**Clinical**—An 87-year-old woman presented with symptoms of generalised colicky abdominal pain with associated constipation and vomiting of 3-days duration. She had no previous abdominal surgery. Abdominal examination revealed a distended, tympanic abdomen that was diffusely tender, maximally over the left iliac fossa. Bowel sounds were reduced on auscultation. She was initially investigated with plain film radiology (Figure 1) and then with computerised tomography (CT; Figure 2). Laparotomy findings are shown in Figure 3.

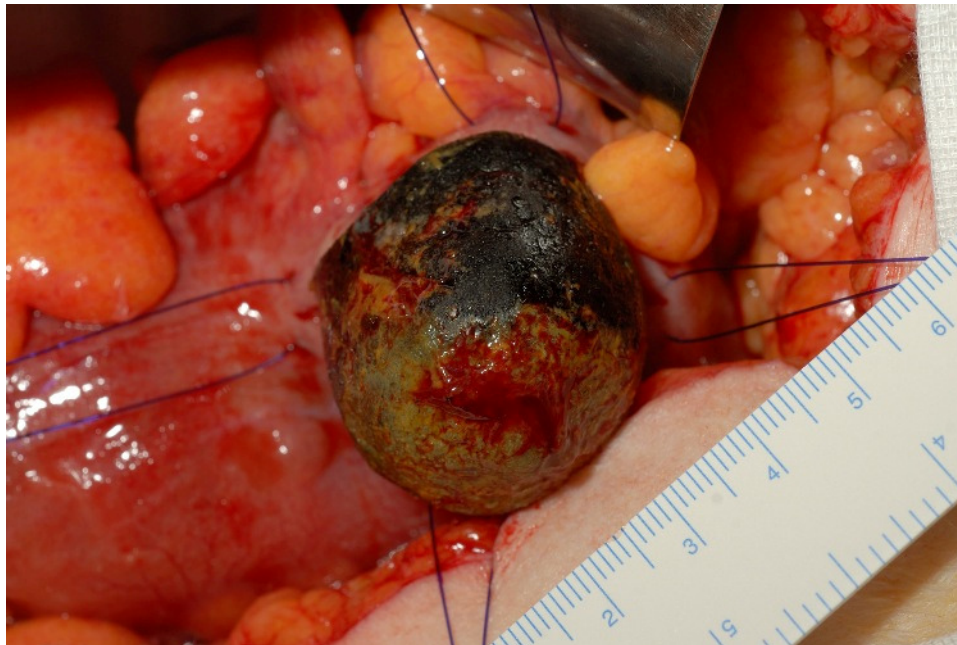
**Figure 1. Plain film radiology**



**Figure 2. Computerised tomography**



**Figure 3. Intraoperative view of colotomy**



*What is the diagnosis?*

**Answer—***Gallstone ileus*

The plain films showed gas-filled loops of large and small bowel. A ring calcified structure was visible in the left lower quadrant. On CT, the gallbladder was thick-walled, with pericholecystic fat stranding, and contained gas (pneumobilia) as well as numerous gallstones. A fistulous tract connected the gall bladder to the proximal transverse colon. The proximal sigmoid contained a 30 mm gallstone, with some minor dilatation, wall thickening and surrounding fat stranding.

At laparotomy, the gallstone was easily palpable in the sigmoid colon which was the point of impaction. There were no other stones palpable on examination of the remainder of the bowel. The sigmoid colon was noted to have marked diverticulosis with a mildly narrowed lumen. The gallstone was manipulated proximally in the colon and cololithotomy was completed. Cholecystectomy was not performed at this emergency presentation.

**Discussion—**Gallstone ileus, first described by Danish scientist and physician Dr Erasmus Bartholin in 1654,<sup>1</sup> complicates fewer than 1% of cholelithiasis.<sup>2</sup> It occurs as a result of luminal impaction of one or more gallstones which navigate through a cholecysto-enteric or -colic fistula. Only a quarter of patients give a history of biliary colic in the year preceding presentation.<sup>2</sup>

Intestinal impaction occurs most commonly in the ileum (60.5%), followed by the jejunum (16.1%), the stomach (Bouveret's Syndrome; 14.2%) and less commonly, the large bowel (4.1%).<sup>2</sup> Colonic impaction usually occurs at a pathological site of

narrowing, for example, due to diverticular disease or colonic malignancy.<sup>3</sup> The classic radiological triad of pneumobilia, bowel obstruction and an ectopic gallstone<sup>4</sup> occurs in less than half of cases on plain abdominal films.<sup>5</sup>

Laparotomy and cololithotomy are usually required although endoscopic management has been described.<sup>3</sup> The entire length of the large bowel should be carefully examined as there is a 10-40% incidence of multiple stones.<sup>3,6,7</sup> The primary goal of the emergency surgery is to relieve the bowel obstruction and often cholecystectomy will be omitted at the initial procedure. Performing cololithotomy in combination with cholecystectomy and cholecystocolic fistula repair is associated with higher mortality and morbidity.<sup>2,8</sup>

Delayed cholecystectomy and cholecystocolic fistula repair can be performed in patients fit for further surgery. However, the majority of patients presenting with gallstone ileus are elderly with co-morbidities and the operative risk in this group may outweigh the low risk of recurrent complications of cholelithiasis.<sup>2</sup>

**Author information:** Magdalena M Sakowska, Philip Bagshaw, Tim Eglinton;  
Department of Surgery, Christchurch Hospital, Christchurch, New Zealand

**Correspondence:** Dr Magda Sakowska, Department of Surgery, Christchurch Hospital, Private Bag 4710, Christchurch, New Zealand. Fax: +64 (0)3 3640352; email: [magda.sakowska@cdhb.govt.nz](mailto:magda.sakowska@cdhb.govt.nz)

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