A Petrifying Bowel Movement: a non-operative assistance to nature's resolution of colonic gallstone obstruction?

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To the Editor,

Gallstones are a rare cause of intestinal obstruction (1-4%) (1) with 2-8% involving the colon (2). A stone is usually over 2cm, 4cm if no stricture or other mass is present (2). Commoner diseases such as malignancy should be considered first. We present a case report of non-operative resolution.

A 71 year old male with five days of abdominal pain, emesis and loose stools presents to the ER. The remainder of his history is unremarkable. On exam, he was vitally normal, distended and without peritonitis. Rectal exam demonstrated an enlarged prostate.

Lab work up revealed leukocytosis (9.9), neutrophilia (88%), hypokalemia (3.2 mEq/L), hypochloremia (94 mEq/L), bicarcbonate 29 mEq/L ; LFTs unremarkable. CT abdomen and pelvis revealed cholecystic-colonic fistula at the hepatic flexure, two large stones within a thick-walled gallbladder and a stone in the sigmoid (Fig. 1) with diverticular stricture. Bowel was not distended and a small amount of air resided in the rectum.

Given these findings, partial large bowel obstruction was diagnosed. Historically, pre-operative diagnosis is attained in 50-66% of patients (1,3,4) as some (30-50%) do not present obstructed, demonstrating the ball-valve obstruction of a stone peristalsing in the colon. Nonetheless, CT scanning is accurate (1,5). If the gallstone can be seen on a plain film x-ray then its absence in subsequent films confirms resolution.

Our patient was admitted, made NPO, electrolytes corrected, fluids and antibiotics administered. On hospital day two, attempted colonoscopy failed to retrieve the stone, revealing diverticulitis with stricture (Fig. 2). The patient remained vitally normal with loose stool ; a slow bowel prep of 250mg of magnesium citrate BID with clear liquid diet was given along with peripheral parenteral nutrition to ensure adequate calories. On hospital day three, a HIDA scan demonstrated prior closure of the fistula and no cholecystitis. Daily abdominal films were obtained ; after a strenuous bowel movement straining of faecal contents confirmed stone passage on hospital day five. Unfortunately it was flushed down the toilet but plain

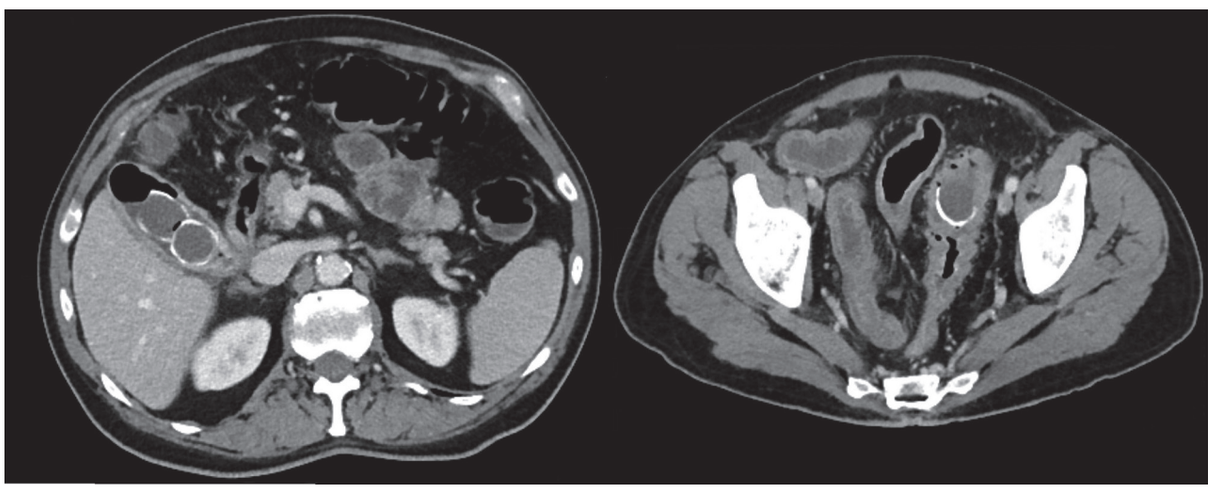

Fig. 1.

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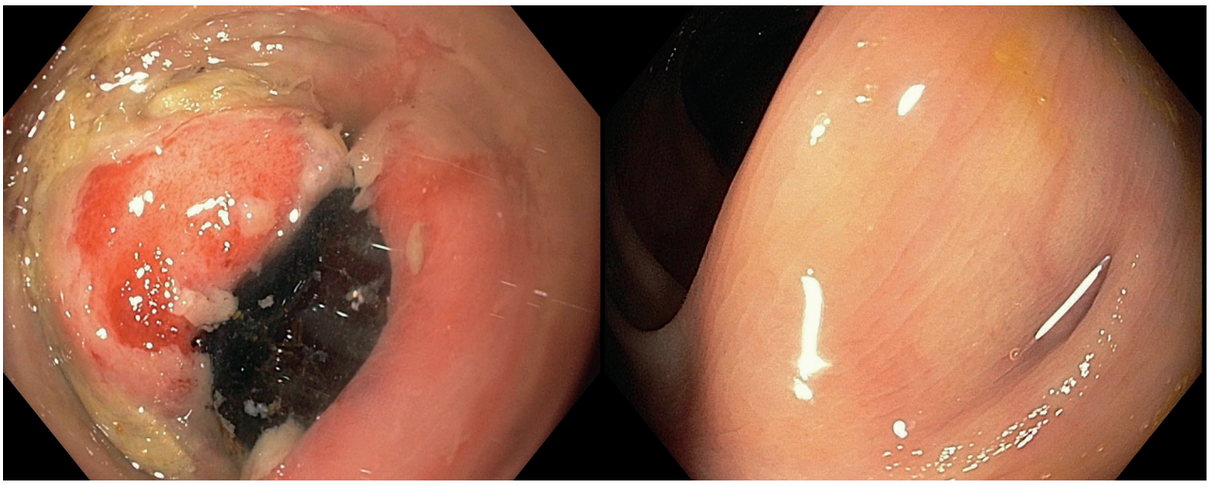

Fig. 2.

film radiograph confirmed absence of a previously seen circular calcified rim in the sigmoid. The following day, the patient tolerated a regular diet and was discharged home. Outpatient follow up colonoscopy seven days later revealed a possible fistula tract with chronic diverticulitis, small polyps and no obstructing mass (Fig. 2). After an informed discussion regarding cholecystectomy versus observation, the patient chose the latter.

Surgery mandates enterotomy for stone removal (7). Patients may have multiple comorbidites exacerbated by the metabolic derangements of bowel obstruction and would not tolerate a colonic leak. Increasing age can be another factor associated with mortality (8). Recurrence of obstruction or cholecystitis occurs in 17% of patients if fistula is not addressed (4). The fistula can be circumnavigated with a biliary drain to generate a manageable biliary-cutaneous fistula(9) or resected (10) ; patients with ASA scores > III may be too high a risk to undergo the latter. Although Lithotripsy can be an attractive option, its success can be limited by interfering small bowel gas (10,11,12).

Non-operative treatment can be entertained provided the stone is less than 3cm and there is a report from 1942 of a 6cm stone passing (5,6) with cathartics and digitalization. Our use of bowel prep and liquid diet provided the patient with nutritive support, mechanical defecatory assistance and prep in case of urgent operation. With an ASA score III (Aortic Atherosclerosis, Diverticulitis) and negative HIDA scan, we could defer cholecystectomy to an elective setting, which our patient refused. Although cases have been described of large bowel gallstone obstruction involving colonic stricture, we report a unique case of non-interventional resolution with clear liquid diet and oral magnesium citrate.

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