Gallstone ileus and intestinal perforation secondary to sigmoid diverticulum

**Key words:** Gallstone ileus. Intestinal oclusion. Diverticular stenosis. Diverticular perforation.

Dear Editor,

Biliary or gallstone ileus is a rare disease representing 1% to 4% of all mechanical intestinal obstruction cases. Gallstone impaction may be facilitated by changes in intestinal dynamics, prior inflammatory conditions, or both benign and malignant stenosing lesions. The most common site for impaction is the terminal ileum (60%), whereas colonic obstruction is much less common, represents only 4.1% of gallstone ileus cases (1,2), and is usually secondary to the passage of gallstones through a cholecystocolonic fistula with subsequent impaction in a previously diseased area (3). Surgical treatment is considered of choice, and single-stage procedures (enterotomy, fistula repair, and cholecystectomy) have a higher mortality rate despite they reduce the need for reintervention and/or complications from persistent biliodigestive fistula (1,4,5).

Case report

We report the case of an 84-year-old woman who presented at the emergency room with diffuse abdominal pain, more severe in the lower hemiabdomen, associated with vomiting and failure to pass gas and stools for 4 days. Her personal history included hypertension, dyslipidemia, and a procedure for ovarian cyst rupture at 15 years of age. The examination revealed moderate abdominal distension and diffuse abdominal tenderness with peritoneal irritation. Lab tests on admission showed leukocytosis at 11,700/mm³ and C-reactive protein over 90 mg/dl, with the remaining parameters within normal range. Abdominal X-rays showed findings consistent with intestinal obstruction at the descending-sigmoid colon. Abdominal computerized tomography (CT) revealed pneumobilia within the liver (Fig. 1), choledochus, and gallbladder walls with moderately dilated loops down to the sigmoid colon, where an intraluminal calcified nodule, 3 x 2 cm in size, could be seen with distal sigmoid wall thickening, multiple diverticula, perisigmoid extraluminal air bubbles, and a moderate amount of free fluid (Fig. 2), all this associated with biliary ileus, gallstones impacted in a sigmoid stricture and intestinal perforation. Surgery unveiled an inflammatory mass in the right hypochondrium, purulent peritonitis, sigmoid diverticular perforation prior to severe cholelithiasis, and thickened wall area in the sigmoid

Fig. 1. Contrast-enhanced computerized tomography (CT) scan of the abdomen: Intrahepatic pneumobilia.
colon (Fig. 3). A sigmoidectomy procedure with terminal colostomy (Hartmann’s technique) was performed, in accordance with the oncologic principles of resection for potential stenosis secondary to neoformation. Pathology documented the presence of inflammatory tissue with multiple diverticula and no malignant findings, all this associated with diverticular stenosis. The patient had a favorable outcome and was discharged on day 7 following the procedure. A second procedure was carried out for cholecystectomy, cholecystocolonic fistula repair, and transit restoration.

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Fig. 2. Contrast-enhanced CT of the abdomen. A. Perisigmoid pneumoperitoneum. B. 1: Intracolonic cholelithiasis. 2: Pneumoperitoneum. C and D. 1: Intracolonic cholelithiasis. 2: Thickened sigmoid colon wall.

Fig. 3. Gallstone, 3 x 2 cm in size, impacted in a sigmoid stricture.
References