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Case Report

Rigler´s Syndrome Case Report

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Abstract

A 58-year-old male with intestinal obstruction due to gallstone ileus secondary to cholecystoduodenal fistula (CDF) and medical history of cholelithiasis, underwent exploratory laparotomy with extraction of one gallstone, enterolithotomy, closure in two lawyers in the jejunum and without complications and successful evolution was discharged due to improvement on the seventh day in the postoperative. The cholecystectomy and CDF closure will be performed in a second stage.

Keywords: Gallstone Ileus; Rigler's Syndrome; Cholelithiasis

Introduction

Gallstone ileus is defined as the presence of one or more gallstones from biliary tree in the lumen of the small intestine estimated at 0.9% - 3.2% which produces a mechanical obstruction of the gastrointestinal tract which may occur in some segment from the stomach to the rectum, as a consequence of the intraluminal impact of one or more biliary stones through a biliodigestive fistula, being a special and rare variant of intestinal obstruction [1,2]. The pathophysiology includes a history of chronic cases of gallbladder lithiasis with inflammatory processes in the gallbladder wall which, when compressing the mucosa, generate ischemia and the formation of fistulous tracts towards the small intestine (CDF and Rigler's syndrome), of which the most frequent is CDF (80%), followed by cholecystocolic (10 to 25%) and to a lesser degree cholecysto-gastric (5%), the latter obstructing the transit at the pylorus level, known as Bouveret's syndrome. We have experienced 22 types of cholecystectomies in different pathological conditions (dyskinetic, biliary sludge, biliary polyp, lithiasis, chronic lithiasis, subacute lithiasis, acute lithiasis, hydrops of the gallbladder, empyema of the gallbladder, sealed perforation, perforated with generalized peritonitis, fistulized to: Stomach, small intestine, and colon, in porcelain, situs inversus, lysed, sclerotic and atrophic gallbladder, sharp or traumatic injury, pseudo lithiasis, agenesis, ectopic of the gallbladder) and the uncommon one corresponds to vesicles fistulized to small intestine, or stomach, these fistulas represent a mortality rate of 12 to 27% and 50% morbidity. The diagnosis classically called "Rigler's Triad" is composed of pneumobilia, dilatation of intestinal loops and Visualization of the lithoid in the intestinal tract, which is found in less than 30% by tomography with a sensitivity of 93% and specificity of 99%. Surgical management with an open technique reduces morbimortality, and can be performed in one or two stages, the first includes enterolithotomy, dismantling of the bilioenteric fistula and cholecystectomy in young patients, while in two stages enterolithotomy is performed initially and in a period of 6 months to dismantle the bilioenteric fistula in adult patients [3-17].

Case

This case discusses a 56-year-old male was admitted to the emergency department with a history of gallbladder stones of more than 10 years of evolution without acute cholecystitis, with no history of importance for the current condition. He came to the emergency department of the Regional Hospital Dr. Carlos Mc Gregor No.1 of IMSS in Mexico City for a 6-day evolution of illness characterized by severe abdominal pain located in the upper abdomen with an intensity of 8 out of 10, vomiting of gastrointestinal contents and abdominal distention with intolerance to oral intake. On physical examination the patient was conscious, oriented, dry oral mucosa, cardiopulmonary without compromise, abdomen with abdominal distention in the upper abdomen with moderate intensity pain and no evidence of peritoneal irritation, increased peristalsis. He was treated with parenteral solutions, installation of a nasogastric tube with gastrointestinal contents of 1000 ml. Computed axial tomography of the abdomen showed an ileal lithotripsy with dilatation of the loops above the lithotripsy as well as pneumobilia (Figure 1). Laboratory results: leukocytes 14.5 x 103 ml, platelets 288 x 103 ml, hemoglobin 14.55 g/dl, amylase 38, lipase 21, TP 16.5 glucose 123, urea 30.9 mg/dl creatinine 0.81 mg/dl, sodium 141 mEq/l, potassium 3.6 mEq/l, chlorine 103 mEq/l, AST 18, ALT 19, DHL 183, BT 1.69, BD 0.47, BI 1.22.

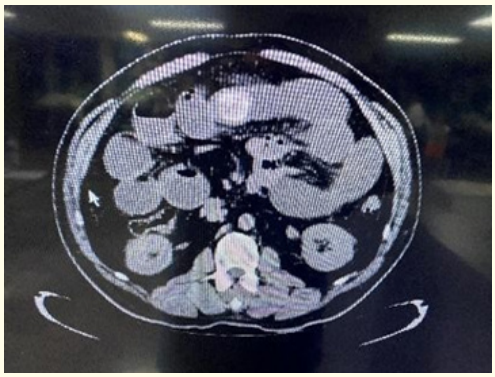

Figure 1: CT Scanner of the abdomen. Jejunal gallstone.

Results

Prior written consent, exploratory laparotomy was performed with a midline incision, finding thickened plastron of the greater omentum and inflammation data on the small intestine, gallbladder, second portion of the duodenum and gastric antrum, dilation of the small bowel loops and presence of an oval-shaped bile duct 4.20 cm long x 2.5 cm wide located in the jejunum 50 cm from the ligament of Treitz (Figure 2). Enterotomy is performed in the antimesenteric border of 3 cm in a longitudinal direction, and the bile duct is extracted by milking with transverse closure in two planes with Chromic Catgut 00 for the mucosa, and silk 000 for the second plane with sero-muscular stitches (Figure 3). The patient's first 48 postoperative hours were satisfactory and he tolerated clear liquids on the third day. He was discharged on the sixth postoperative day with adequate tolerance to the oral route, afebrile, normal bowel movements and normal control laboratory figures. The cholecystectomy with repair of the fistula will be performed in a period of 4 to 6 weeks postoperatively with previous control endoscopy.

Figure 2: Dilated jejunum with projection of gallstone within.

Figure 3: Gallstone extracted from small intestine (jejunum).

Conclusion

Rigler's syndrome is an uncommon complication of cholecystitis, whose diagnosis is clinical and by imaging (X ray, CT, MRI), with adequate management of parenteral solutions and nasogastric tube to correct fluid losses and control intestinal occlusion. A history of chronic cholecystitis is a determining factor. Surgical conduct can be performed in two stages, as in our case and recommended for adult patients, where enterolithotomy is performed in the first stage and closure of the cholecysto-enteric fistula and cholecystectomy in the second stage, or in a single stage (enterolithotomy, closure of the cholecystoenteric fistula, cholecystectomy or cholecystostomy). Minimally invasive surgery offers greater advantages every day like laparoscopic surgery since 1995, however robotic surgery since 2019 offers potential results due to greater precision in the dissection of the management of cholecystoenteric fistula [18].

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