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Case Report: Acute cholecystitis complicared with colocystocolonic fistula

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ABSTRACT
Acute cholecystitis is an acute inflammatory disease of the gallbladder, commonly caused by lithiasis. It is more prevalent in females, and one of its risk factors is obesity. In the vast majority of cases, symptoms include intense pain in the right hypochondrium or epigastrium, which may radiate to the back, associated with nausea, vomiting, diarrhea, hyporexia, fever and jaundice. The diagnosis is made through images, such as abdominal ultrasonography, which is considered a very efficient method for these cases, or computed tomography of the abdomen and in some situations through endoscopic examination (colnoscopy). The treatment is surgical. The patient in the case report in question had a cholecystocolic fistula, which is a rare complication of biliary lithiasis, which has variable and nonspecific clinical manifestations, and its diagnosis is often made incidentally in the perioperative period of its underlying cause. The most indicated treatment is cholecystectomy with closure of the fistula by videolaparoscopy.

Keywords: Colecystitis, etiology, symptoms, fistula, diagnosis, treatment.

1 INTRODUCTION

Acute cholecystitis is an acute inflammatory disease of the gallbladder, commonly caused by lithiasis. It is more prevalent in females (4:1), and has as risk factors obesity, advanced age (greater than or equal to 50 years), multipartum and childbearing age. Gallstones affect 10 to 15% of the population in developed countries, and presents as calculous cholecystitis in 20% of symptomatic patients, and there may be clinical evolutions that vary according to severity. More than 90% of cholecystitis cases are associated with cholelithiasis, and when affected in the elderly, they present higher mortality. On the other hand, cholecystocolic fistula is a rare complication of gallstones, in

which its clinical manifestations are variable and nonspecific, and its diagnosis is often made incidentally in the perioperative period of its underlying cause. (1,9,11)

Symptoms include severe pain in the right hypochondrium or epigastrium observed in 74 to 96% of patients, and may radiate to the back, associated with nausea, vomiting, diarrhea, hyporexia, fever and jaundice, and these signs and symptoms were identified in 60 to 87% of cases. Cholecystocolic fistula is a complication of chronic cholecystitis that occurs in less than 15% of patients, with a prevalence of around 80% in elderly over 60 years of age and females, who present exuberant symptoms, associated or not with intestinal obstruction. (2,4)

The diagnosis is made through images, such as abdominal ultrasound, which is a method considered very efficient for these cases or computed tomography of the abdomen and in some situations by means of endoscopic examination (colonoscopy). However, as the clinical manifestations are nonspecific, it contributes to the preoperative diagnosis being made in only 7.9% of the patients and thus, the detailed description of the real complication will be performed in a furtuitous way during the intraoperative period to treat the underlying cause. (7,8)

Mirizzi syndrome is a rare complication in which a gallstone becomes lodged in the cystic duct or neck of the gallbladder, which results in compression of the common bile duct and its consequent obstruction, which causes jaundice. This syndrome is classified into 5 groups, according to the degree of biliary tract involvement, being: I) extrinsic compression of the common common bile duct or the common hepatic duct by a calculation in the vesicular infundibulum or cystic duct; II) presence of cholecystobiliary fistula with a diameter less than 1/3 of the circumference of the common hepatic duct/choledochus; III) cholecystobiliary fistula with a diameter greater than 2/3 of the circumference of the common hepatic duct/choledochus; IV) cholecystobiliary fistula that affects the entire circumference of the common hepatic duct/choledochus; V) any type, if there is presence of cholecystoenteric fistula, being Va: without biliary ileum and Vb: with biliary ileum. (10)

For those patients who are classified as type I of Mirizzi syndrome, partial or total cholecystectomy is recommended. For type II, cholecystectomy with fistula closure or choledochoplasty with suture of the fistulous orifice in the remaining wall of the gallbladder is performed. If there is cholecysto-choledochal fistula (types II, III and IV), laparotomy by the conventional route is imperative, since biliary drainage needs to be performed simultaneously. (12, 13)

The treatment is surgical, and cholecystectomy with closure of the fistula by videolaparoscopy is the most indicated choice, because it courses with shorter hospital stay and better postoperative period, in relation to laparotomy. It consists of unclogging the intestine by removing the stone, with or without resection of the intestine. Due to necrosis, perforation, and ischemia, removal of the intestinal segment may be necessary. In addition, a check for the presence of other stones in the rest of the small

intestine is made, since the occurrence is from 3 to 16% of cases. Recurrence is 5 to 20% in patients treated only with the removal of obstructive stones. (3,7,8)

2 CASE REPORT

A 57-year-old female patient was admitted to the Santa Casa de Presidente Prudente with a previous history of cholelithiasis, awaiting surgery for two years. However, two months ago, the pain in the right hypochondrium increased in intensity, and accompanied by nausea and several episodes of vomiting, which made her seek the hospital more than 3 times. He reports that, two days ago, the pain became unbearable and he began to present a fever of 38 degrees. She also had diarrhea and three episodes of bilious-looking vomiting. He did not report fecal acolia or jaundice.

Personal history: hypertensive patient, makes use of losartan and hydrochlorothiazide. Diabetic, with irregular use of medication. He has no history of previous surgery. No habits and vices.

On physical examination, the patient presented pain in the right hypochondrium, with positive Murphy's sign and positive BD.

The patient presented ultrasound of the abdomen demonstrating acute cholecystitis (Figure 1).

Laboratory tests showed urea of 35 mg/dL, creatinine of 1.5 mg/dL, sodium of 139 mEq/L, GOT of 505 U/L and TGP of 497 U/L. The blood count revealed leukocytosis of 27,690 /mm3, hemoglobin of 11.8 g/dL and platelets of 309,000 /µL.

Laparoscopic cholecystectomy was performed (Figure 2). During the procedure, a cholecystocolonic fistula was identified and it was decided to convert to open surgery. An open cholecystectomy with colon raffia was then performed. The patient presented good evolution of the condition, with diet in the second postoperative period, discharged in the fourth postoperative period, returning to the outpatient clinic well and without complaints.

Figure 1- Ultrasonography of the abdomen with calculus in the infundibulum, but does not show inflammation with fistula.

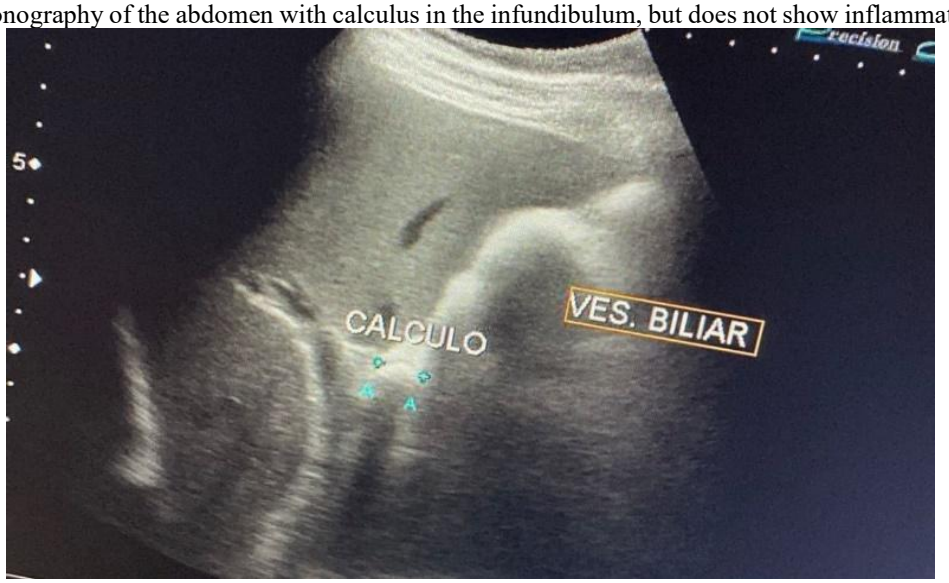
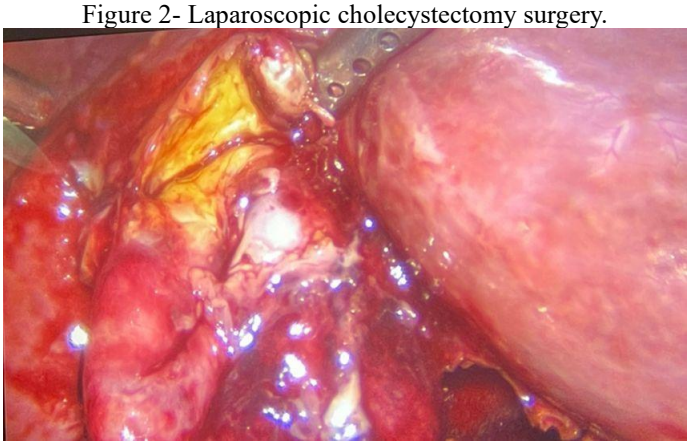


Figure 2- Laparoscopic cholecystectomy surgery.



3 DISCUSSIONS

In the first analysis, it is worth highlighting the difference between cholelithiasis and cholecystitis. Cholelithiasis is a gallstone that generates biliary colic. Cholecystitis is the inflammation of the gallbladder that most often results from an obstruction of the cystic duct in 95% of cases and is usually associated with previous pictures of cholelithiasis. This association occurred with our patient who had been waiting for surgery for cholelithiasis for 2 years. Due to the delay in performing cholecystectomy, this calculus was persistently impacted and biliary stasis occurred, causing damage to the gallbladder and, thus, generating its inflammation**.**

Acute cholecystitis, then, can be described as an inflammatory pathological process, occurring, for the most part, associated with a picture of lithiasis. Friction of the stone in the cystic duct or infundibulum can cause obstruction and distension of the gallbladder, characterizing biliary colic. This process triggers the increase in the production of prostaglandin and lisolectin (mucosal irritant), initiating the inflammatory process. In this case, inflammation with fistula was identified in laparoscopic cholecystectomy surgery, which quickly converted to open surgery.

Risk factors associated with a higher incidence of gallbladder disease and gallstones are: female gender, obesity, hormonal exposure, diabetes, liver disease, age over 40 years, and weight loss. The present case reports a patient at high risk of acute cholecystitis, because she is female, has diabetes (uses medication, but irregularly) and is over 40 years old.

To confirm the diagnosis, the patient's symptoms and laboratory and imaging tests should be analyzed. The clinical picture is characterized mainly by epigastric pain of strong intensity radiating to the back, nausea and vomiting, persistent pain for more than 12 hours, positive response to Murphy's maneuver, tachycardia and elevated temperature. Laboratory tests show leukocytosis, increased direct bilirubin, elevated amylase, and elevated alkaline phosphatase. In imaging exams, ultrasonography identifies gallstones and is therefore the most indicated exam, however radiography, computed tomography and magnetic resonance imaging are important for the exclusion of differential diagnoses.

The introduction of ultrasound has brought a revolution in the field of gastroenterology, especially in the study of the liver and bile ducts, due to its simple, precise and non-invasive form of analysis. Ultrasonography has no contraindications or harmful effects, and the preparation of the patient is simple and can be performed at the bedside, even in cases of critically ill patients. This technique has a sensitivity of more than 90% in the detection of gallbladder stones, being able to diagnose even small stones with a diameter of up to 2 mm, regardless of the number of them.

However, it is important to emphasize that the quality of the exam and, consequently, its sensitivity may be impaired in obese, distended or intraperitoneal adhesion patients. In our case, ultrasound of the biliary region identified calculus in the infundibulum, but without inflammation with fistula. This calculation was enough to diagnose acute cholecystitis, since it was responsible for biliary colic, referred to as pain in the right hypochondrium.

Our case belonged to the group with the highest prevalence (woman, diabetic, over 50 years of age), with a previous history of cholelithiasis and presented the clinical picture and results of tests that confirmed the diagnosis of cholecystitis. Thus, the chosen approach was laparoscopic cholecystectomy surgery.

Laparoscopic cholecystectomy surgery was first performed in 1987 in France, two years after the first laparoscopic cholecystectomy in Germany, and performed in Brazil in 1990. Laparoscopic cholecystectomy has been shown to be 3superior to conventional (open) surgery in several aspects. This minimally invasive approach offers several advantages, including less surgical aggression, shorter hospital stays, and faster return to social and work activities.

When performing laparoscopic cholecystectomy, the surgeon makes small incisions in the abdominal region and inserts a laparoscope and special surgical instruments to remove the gallbladder.

Cholecystectomy is indicated in patients with cholelithiasis associated with acute cholecystitis. In general, a patient with acute cholecystitis is hospitalized, the patient is hydrated and electrolyte replacement is done intravenously and fasting is established.

In addition to faster recovery, laparoscopic cholecystectomy also offers a lower risk of infections, less blood loss during the procedure, and a lower incidence of postoperative complications such as adhesions and incisional hernias.

However, there is a high proportion of cases in which it is not possible to carry it out. About 10 years ago, situations such as pregnancy, previous abdominal surgery, intolerance to increased intra-abdominal pressure, intestinal obstruction, coagulopathy, obesity, cirrhosis, intolerance to general anesthesia, choledocholithiasis and acute cholecystitis were considered as absolute contraindications of laparoscopic cholecystectomy.

In addition, in some patients, when there are technical difficulties (anatomical visualization, extensive inflammation, adhesions, bile duct lesions, retained bile duct stones and uncontrolled

bleeding, complications inherent to laparoscopic dissection), it is necessary to convert from laparoscopic surgery to open surgery. Studies have shown that this conversion is done in 1.5 to 19% of patients. In the case reported, a cholecystocolonic fistula was identified. Cholecystocolic fistula is a rare complication resulting from the chronic local inflammatory process, its diagnosis often made during the intraoperative period and, thus, being performed the conversion to open cholecystectomy.

If surgery is not a viable option for the patient, percutaneous cholecystostomy may be an effective diagnostic and therapeutic alternative, with an improvement rate of about 90% of cases. Especially in elderly and unstable patients, in whom surgery presents significant risks, percutaneous cholecystostomy can be performed under local anesthesia. Combined with the use of antibiotics, this approach can improve the acute picture of the condition, and subsequently cholecystectomy (surgical removal of the gallbladder) can be performed after a period of 3 to 4 months. Our patient did not fit the criteria of percutaneous cholecystostomy.

Thus, the patient presented good evolution of the picture, even having undergone open surgery and being in the risk group. He returned to the outpatient clinic without any apparent complaints and currently continues his life normally without abdominal pain.

4 CONCLUSIONS

We conclude that acute cholecystitis complicated with colocystocolonic fistula requires early diagnosis and appropriate surgical treatment, the access route depends on the fitness of the surgeon, in the minimally invasive option, conversion to open surgery may be necessary in some cases and postoperative follow-up is essential to ensure an adequate and uncomplicated recovery.

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