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CASE REPORT

Gallbladder torsion: A case report

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Abstract

Volvulus of the gallbladder or gallbladder torsion (GT), is a condition in which an organ twists along its long axis leading to the vascular source compromise. The GT was first diagnosed in 1898 as a rare cause of idiopathic cholecystitis. Some 500 cases have been reported ever since, and they account for 0.1% in acute cholecystitis cases. An 85-year-old male patient presented with epigastric abdominal pain that was referred to as the upper abdominal quadrant (UAQ). The pain did not radiate elsewhere but was constant and severe. Moreover, it did not change with eating; nonetheless, the patient had anorexia, nausea, and biliary vomiting that occur two times. Fever and chills, weight loss, and icterus were not observed. According to the ultrasound report, flat cholecystitiswas diagnosed, and the patient underwent cholecystectomy. During the operation, GT was confirmed. Diagnosis of GT in elderly patients without symptoms of acute abdomen and cholecystitis should be considered in differential diagnosis to prevent complications and mortality.

Key words: Acute cholecystitis, Gallbladder, Torsion

Introduction

Idiopathic cholecystitis accounts for 2%-15% of all acute cholecystitis cases and is diagnosed as gallbladder inflammation without evidence of gallbladder cystic duct obstruction (1). Volvulus or gallbladder torsion (GT) is a condition in which the organ twists on its elongated mesentery along the axis of the cystic duct and artery (2-4). The definite cause of the GT is unknown; however, in the context of an anomaly, several factors can underlying factor for the incidence of GT in clockwise or counterclockwise directions, including a long mesentery and non-adhesion of the gallbladder to the liver, free-floating, suspended gall bladder, sudden body movements, severe peristalsis of adjacent viscera, and blunt abdominal trauma (5-7).

The congenital malformations mentioned above are found in only 5% of the gallbladder (7). The GT is a rare cause of idiopathic cholecystitis that was first diagnosed in 1898 (8 and 9) and has been reported in approximately 500 cases as yet (10). The prevalence is 0.1% in patients with acute cholecystitis(10). The clinical signs of GT are similar to those of acute cholecystitis. Nevertheless, they are not typical and are not usually diagnosed preoperatively (11). Furthermore, the GT is more frequent in older women and a long delay in diagnosis is associated with increased morbidity and mortality. The GT should be treated with emergent cholecystectomy (10), and emergent intervention is necessary to prevent the deadly result of missed gallbladder volvulus. Surgery and cholecystectomy are emergent (6); however, the treatment can also be performed by laparoscopy (12). Here, we report a case of GT in an elderly male.

Cases

An 85-year-old male patient presented with sudden epigastric abdominal pain for two days,

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Figure1: Gallbladder volvulus



Figure2: Gallbladder after cholecystectomy

which was referred to the RUQ. The pain did not radiate elsewhere and was constant and severe. Moreover, there was no change in the pain severity with eating; however, the patient had anorexia, nausea, and biliary vomiting twice. Fever and chills, weight loss, and icterus were not observed.

On physical examination, the patient was not icteric. The conjunctiva was a little pale, and mucosa was dry. No distension was found in the abdominal examination. He had generalized tenderness that was worse in the upper quadrant and epigastric region. The patient had Abdominal guarding and rebound tenderness. Moreover, the Murphy sign was negative, and no abdominal mass could be palpated. Laboratory tests only indicated leukocytosis 12900 and alkaline phosphatase 227, whereas bilirubin and liver enzymes were at normal levels.

Ultrasound gallbladder examination revealed distended gallbladder with an AP diameter of 55 mm and increased parietal edematous with 6mm thickness and contained a sludge but no stone. Moreover, there was some fluid around the gallbladder and liver with severe serous fat edema surrounding the gallbladder suggesting the incidence of cholecystitis.

The patient underwent surgery with a cholecystitis diagnosis. The abdomen was opened with Kocher's incision (Figure 1). The gallbladder was revealed with trifold torsion. Devolvulation of the gallbladder was performed, and the cystic duct and artery were each individually ligated (Figure2). The patient was discharged from the hospital four days after surgery in good general condition without any complications and with antibiotic and analgesics prescription. A week later, he visited the clinic for a follow-up. The general condition and abdominal pain had completely resolved, and there were no surgical complications.

Discussion

In this case report, the gallbladder was diagnosed with a trifold twist around its pedicle. In GT, typical symptoms of acute cholecystitis were not present in terms of clinical signs; however, non-specific symptoms appeared. Nevertheless, the general symptoms of acute cholecystitis may somewhat be observed (5 and 13) since the torsion causes cystic duct and artery occlusion. Usually, the pain is sensed in the RUQ suddenly and severely; however, it was rarely radiated to the right shoulder (5). This patient also reported severe and sudden pain in the RUQ but no diffuse pain. Although masses can be touched in 54% of the cases, and no mass was touched in the patient's abdomen (5). Contrary to expectation, these patients have no toxemia and jaundice; however, if peritonitis is left untreated, it can be caused due to gallbladder perforation (5). Laboratory findings are not specific (5 and 13). In this patient, there was the only leukocytosis and increased alkaline phosphatase, whereas bilirubin and liver function test levels were normal. Radiologic and ultrasound examination may also indicate stones in approximately 25% of the cases (13). Only 10% of the GTs are diagnosed preoperatively (13). In our case, clinical findings such as pain and tenderness in the RUQ suggested acute cholecystitis but ultrasonography was performed to confirm the diagnosis and gallbladder wall thickness was reported.

Conclusions

The GT is difficult to diagnose before surgery, and it is not often diagnosed. Recent experience in

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ultrasound and computed tomography may show a large conical or cubic gallbladder floating in the anterior abdomen and outside its bed in the liver along with multi-echo layers at the cone end, which are the specific findings of GT. At any rate, GT diagnosis should be considered in patients with symptoms of acute cholecystitis without stone, especially in elderly patients. The preferred treatment for GT is immediate open or laparoscopic cholecystectomy after devolvulation and decompression of the gallbladder (4 and 9). If the GT is diagnosed and treated on time, mortality can be less than 5% (2 and 4). Our patient was also discharged without complications after surgery.

Conflict of Interest

There is no conflict of interest to declare.

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