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CASE REPORT

Xanthogranulomatous Cholecystitis

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ABSTRACT

Xanthogranulomatous cholecystitis is a rare, benign, chronic inflammatory disease of the gallbladder (GB). Its importance lies in the fact that imaging studies and intraoperative appearance may mimic tumor of the GB. Xanthogranulomatous cholecystitis is difficult to diagnose pre- or intraoperatively and remains a challenge in medical practice. The definitive diagnosis depends on the histopathologic examination.

Keywords: Gallbladder cancer, Surgery, Xanthogranulomatous cholecystitis.

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INTRODUCTION

Xanthogranulomatous cholecystitis (XGC) is an uncommon variant of chronic cholecystitis characterized by the presence of grayish yellow nodules or streaks in the gallbladder (GB) wall, mainly caused by lipid-laden macrophages.[1] Although well-defined pathologically, XGC still remains difficult for the radiologist to recognize because some of the sonographic and computed tomography (CT)[2-4] features of the disease are nonspecific, such as GB wall thickening and calculi. This case report describes the clinical, sonographic, and CT findings in one patient with histologically diagnosed XGC.

CASE REPORT

A 59-year-old male with a history of chronic calcular cholecystitis, type II diabetes mellitus was admitted to Al-Sabah Hospital, Kuwait, with a 2-day history of abdominal pain and jaundice.

Abdominal ultrasound (US) and CT abdomen were done, which revealed distended GB with concentric lobulated wall thickness (1.1 cm) with mud seen within it, dilated common bile duct (CBD), dilated intrahepatic biliary radicles, possibility of cholangiocarcinoma as described by sonarist and suggestion of cholecystitis with fluid collection in CT conclusion. The patient had endoscopic retrograde cholangiopancreatography with papillotomy and sweeping to the CBD with balloon catheter, with small amount of pus coming from the GB as described by the interventional radiologist.

Laparoscopic cholecystectomy was started, which was converted to open cholecystectomy. The GB wall was thickened and the serosa was surrounded by dense fibrous adhesions, which were attached to adjacent hepatic parenchyma and transverse colon. There was a small-sized abscess in the GB wall. Dissection between the GB serosa and hepatic parenchyma was difficult leading to subtotal cholecystectomy. Cross-section through the wall revealed multiple yellow-colored, nodule-like lesions, and there were also multiple black-pigmented gallstones.

The pathologic findings showed the collections of foamy histiocytes containing abundant lipid in the cytoplasm and admixed lymphoid cells. Histologically, it was confirmed as XGC.

The picture of XGC is shown in Figures 1 and 2.

The patient was discharged on postoperative day 10 without complications.

DISCUSSION

Xanthogranulomatous cholecystitis was first reported and named by McCoy et al, with a low incidence, merely 0.7 to 13.2% of all inflammatory diseases of the GB, and

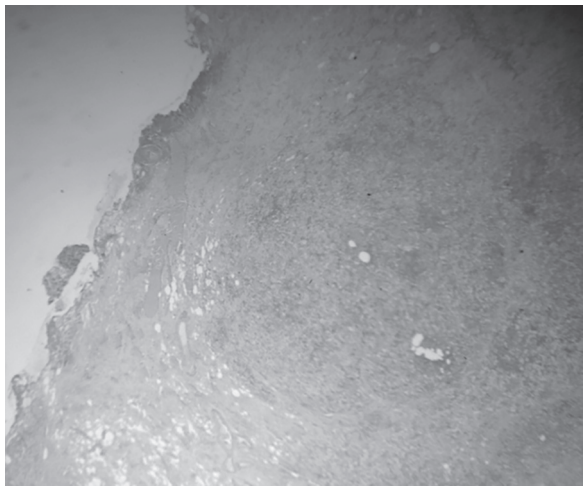

Fig. 1: Low-power microscopic view of ulceration of epithelium with underline lobulated lesion

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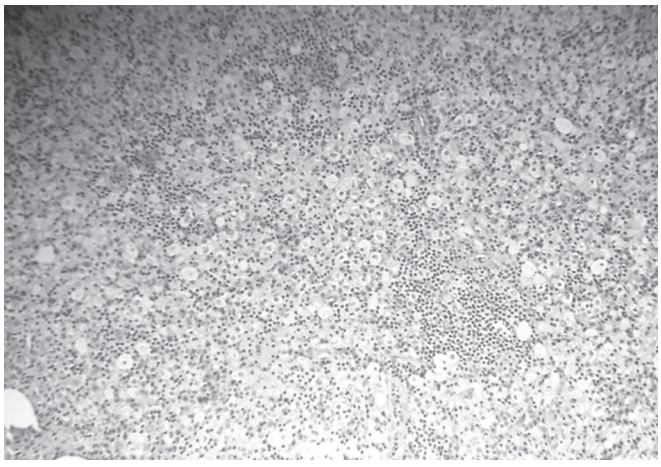

Fig. 2: High-power microscopic picture. Collections of foamy histiocytes mixed with lymphocytes

it occurs mostly in middle-aged and old persons.[5-8] The low incidence of XGC sometimes leads to misdiagnosis by clinicians.

No symptoms and signs are specific for XGC; they are similar to those of acute or chronic cholecystitis.[9] In this case report, the patient had the symptoms in the right hypochondrial region and suffered from radiating pain in the shoulder and back, nausea, vomiting, and fever. Yet, some features on US[4] and CT[10] were highly suggestive of XGC, including thickening of the GB wall, GB stone shadow, and adhesion to neighboring tissues and organs. Despite all these distinctions, it is difficult to differentiate XGC from carcinoma of the GB clinically.[11,12] In this study, US misdiagnosed this case of XGC as carcinoma of the GB, while CT is not, indicating a fairly high misdiagnosis rate, which may be related to the low incidence of XGC as well as insufficient experience of clinicians. Chronic inflammation in XGC causes persistent thickening of the GB wall, adhesions to adjacent tissues and organs, and in some cases, Mirizzi syndrome was found.[2] In other cases, an internal fistula forms between the GB and a neighboring viscous.[13] In this case report, the major intraoperative findings included thickening of the GB wall and adhesions of the GB to adjacent tissues and organs. In addition, cholecystolithiasis was found in our case, in accordance with the incidence rate in most reports (85[13] to 100%). Cholecystectomy is the first choice for XGC, either complete or partial. Dissection should not proceed by force and the excision range should not be blindly extended in order to avoid injuries to the extrahepatic bile duct and neighboring organs. Special attention should be paid to cases where internal fistula or Mirizzi syndrome is found and biliary injuries should be avoided. Analysis of data from outside of China[7] shows that in 65% of XGC cases, complete cholecystectomy was difficult and 35% of them underwent partial cholecystectomy. In our study, the mean duration of operation was longer than that of common open cholecystectomy, illustrating that XGC creates difficulty in operation.

Although XGC is a benign change of the GB with a low mortality rate,[13] patients with XGC usually have a longer hospital stay than those with cholecystitis who undergo cholecystectomy and more postoperative complications, including leakage of bile, bile peritonitis, GB bleeding, hepatic abscess, infection of the incisional wound, and cholangitis stenosis. This is largely related to difficulty in stripping the GB, the mode of operation, and the physical condition of the patient.[7]

In spite of difficulty in surgical treatment of XGC, the operation can be carried out successfully as long as clinicians have a sound knowledge of the anatomical structures of the GB, make an accurate intraoperative diagnosis, and choose the proper mode of operation.

CONCLUSION

Differentiating XGC from GB cancer is a diagnostic dilemma. Making this distinction preoperatively or intraoperatively is difficult. The presence of firm adhesions of the GB to neighboring organs and tissues, thickened GB wall together with gallstones in a patient with chronic disease is highly suggestive of XGC. A definitive diagnosis still necessitates a histopathological examination.

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