Xanthogranulomatous cholecystitis presenting with duodenal ulcer and cholecystoenteric fistula

A 66-year-old woman presented with a nonhealing duodenal ulcer after undergoing Helicobacter pylori eradication therapy for 1 week and proton pump inhibitor treatment for 4 months. Repeat endoscopy showed the duodenal ulcer with a whitish mucous coating and some whitish discharge over the bulb. The mucous coating retracted upward with breathing (Fig. 1). Abdominal sonography revealed gallbladder stones with an ill-defined gallbladder wall but no gallbladder distension. A computed tomography (CT) scan of the abdomen showed gallbladder stones with significant gallbladder wall thickening. The gallbladder wall had an indistinct border toward the liver and duodenal bulb. A coronal view showed duodenal wall thickening without lumen obstruction (Fig. 2). After admission, the patient’s vital signs were stable, but physical examination showed mild tenderness over the epigastric region and an equivocal Murphy’s sign. In addition to chronic cholecystitis with infiltration to the duodenum, gallbladder carcinoma with duodenal invasion was strongly suspected. The patient underwent surgical intervention and a cholecystoenteric fistula was noted. Pathological examination of specimens from the fistula showed aggregation of histiocytes with microvesicular foamy cytoplasm (Fig. 3). The final diagnosis was xanthogranulomatous cholecystitis with duodenal involvement.

Xanthogranulomatous cholecystitis is a rare inflammatory disease of the gallbladder [1]. It is characterized by a focal or diffuse destructive inflammatory process and is often confused with gallbladder carcinoma, both clinically and radiologically [2]. Gallstones play an important role in causing this disease. Xanthogranulomatous cholecystitis is associated with a high incidence (>30%) of complications [3], including perforation and fistula formation into adjacent organs such as the liver, duodenum, stomach, colon, and skin [4,5]. A cholecystoenteric fistula may be noted following duodenal ulceration and perforation, even when there are no signs of a severe inflammatory reaction of the gallbladder and infiltration into the duodenum. In conclusion, this report describes an unusual duodenal ulcer-like lesion, which was caused by xanthogranulomatous cholecystitis, a form of chronic cholecystitis, with cholecystoenteric fistula.

**Competing interests:** None

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**Fig. 1** A 1.5-cm, nonhealing ulcerative lesion in a 66-year-old woman, with a whitish mucous coating and some whitish discharge over the bulb (arrow); easy touch bleeding was also noted.

**Fig. 2 a, b** Abdominal computed tomography (CT) scan showing gallbladder stones with gallbladder wall thickening (arrows). c The gallbladder border is obscure toward the duodenum and liver (arrow heads). c The gallbladder border is obscure toward the duodenum and liver (arrow heads).

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Fig. 3 Representative hematoxylin and eosin-stained histological sections of the surgical specimen. a Rokitansky–Aschoff sinuses (arrows) in the inflamed gallbladder. b Multiple inflammatory cells with foamy histiocytes (arrows).