Case report

Right hypochondrial abscess: A rare consequence of supportive cholecystitis

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Highlights

- Elderly diabetic male presented fever, malaise and a right subcostal mass.
- Examination revealed a 10 × 16 cm tender, erythematous mass palpable over the right upper quadrant.
- CT showed large abscess measuring 17.0 × 10.0 × 13.0 cm subcutaneous and intraabdominal component.
- Diagnosis of Suppurative cholecystocutaneous fistula with abscess formation was made. Cholecystostomy with stone extraction was done.
- Take home message: Any swelling should be investigated early and thoroughly for underlying pathology.

Abstract

Introduction: Spontaneous cholecystocutaneous abscess is an extremely uncommon complication of acute suppurative cholecystitis. Over the past century very few cases of spontaneous cholecystocutaneous fistulas have been described in the medical literature. We, here, report a case of abdominal wall abscess secondary to cholecystocutaneous fistula.

Case report: A 78 -year-old male presented as an emergency with a 2 days history of fever, malaise and a right subcostal mass. He was known diabetic with no other illnesses or significant past cardiac insult history; however, he was admitted six months ago with right hypochondrium pain with acute calculous cholecystitis, managed conservatively and discharged in stable condition. On examination, the patient was apyrexial with a 10 × 16 cm tender, erythematous mass palpable over the right upper quadrant (Fig. 1). The white cell count on admission was 21 × 10^9/l, C-reactive protein was 173 mg/l and liver function tests were normal apart from a marginally deranged alkaline phosphatase of 155 IU/l and a gamma glutamyl transferase of 88 IU/l. A subsequent CT scan of the abdomen showed huge abscess measuring 170 × 10.0 × 13.0 cm in its maximum transverse diameter with subcutaneous and intraabdominal component.

Conclusion: A high index of suspicion is necessary to diagnose this entity preoperatively and to avoid associated morbidity.

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1. Introduction

Spontaneous cholecystocutaneous fistula is an exceptionally uncommon complication of chronic calculous cholecystitis in the present era. The reason behind this remarkable drop in incidence is probably the introduction of antimicrobial therapy and early surgical management of biliary tract disease. We report a case of spontaneous cholecystocutaneous fistula in a patient who presented with an abscess in the right upper quadrant.

2. Case report

A 78 -year-old male presented as an emergency with a 2 days history of fever, malaise and a right subcostal mass. He was known diabetic with no other illnesses or significant past cardiac insult history; however, he was admitted six months ago with right hypochondrium pain with acute calculous cholecystitis, managed conservatively and discharged in stable condition. On examination, the patient was apyrexial with a 10 × 16 cm tender, erythematous mass palpable over the right upper quadrant (Fig. 1). The white cell count on admission was 21 × 10^9/l, C-reactive protein was 173 mg/l and liver function tests were normal apart from a marginally deranged alkaline phosphatase of 155 IU/l and a gamma glutamyl transferase of 88 IU/l. A subsequent CT scan of the abdomen showed huge abscess measuring 170 × 10.0 × 13.0 cm in its maximum transverse diameter with subcutaneous and intraabdominal component.
intraabdominal component transgressing the anterior abdominal wall with gas density is seen of the right anterior lateral lumbar regions with surrounding diffuse subcutaneous edema. There was no oral contrast seen within the axis suggesting that there is no bowel fistula; however, cannot isolate the abscess cavity from the surrounding bowel easily. The abscess is reaching to the duodenum, which shows thickened wall likely from the inflammation, as well as the contiguous bowel loops (Fig. 2). There is 3.0 cm rounded mass like lesion seen at the pancreatic neck with evident dilatation of the pancreatic duct noted. There is Lymph node seen at the liver hilar & peripancreatic region. The provisional diagnosis of perforated cholecystitis with abscess formation was made and incision and drainage with exploration of wound was planned.

Elliptical skin incision given with removal of necrotic skin. Drainage of about 200 ml foul smell thick abscess in the abdominal wall was done. One small opening found communicating with gall bladder lumen with 3 stones inside the gall bladder (10 cm, 3 cm and 1 cm) (Fig. 3). The opening was widened and the stones were removed. The cavity was irrigated with saline and sucked out thoroughly. Foley catheter size 24 G was inserted in the gall bladder lumen through separate subcutaneous opening lateral to wound edge to function as a cholecystostomy tube and fixed to the skin. (Fig. 4). The wound was left open and cavity packed with iodine soaked gauze. The pus culture revealed E. Coli and klebsiella pneumonia and antibiotics were deescalated as per sensitivity. Initially the catheter drained bile for few days, then it started decreasing until it stopped.

The wound was explored again, tube removed and partial closure of wound was done.

The wound healed well with daily light dressing and the patient recovered without any complication and was discharged home.

3. Discussion

The incidence of complications like cholecystocutaneous fistulae was not uncommon in pre antibiotic era, as 169 case were reported by Courvoiser in nineteenth century [1]. However it has become a rare entity with the advent of intravenous antibiotics and the emergence of elective and emergency cholecystectomies for gallbladder disease, as very few cases are reported in the current century [2,3,4].

Cholecystocutaneous fistulae classically present in the diabetic elderly patient, as a painless draining sinus tract in the right upper quadrant of the abdomen, but this tract may alternatively drain to the right iliac fossa, right groin, right gluteal region, umbilicus or left upper quadrant [2]. Alternatively, spontaneous perforation may occur and can fistulate to adjacent viscera like duodenum, colon, stomach or jejunum [3] and rarely to the bronchial tree, stomach and urinary tract [4].
Usually it is a sequela of chronic biliary tract disease, however, patients may not report a previous episode of acute cholecystitis [5]. Impaired blood flow due to high intraluminal pressure in the gallbladder leads to mural necrosis and perforation, leading to either peritonitis or an abscess around the gallbladder. CT abdominal scans and/or fistulograms are usually the investigation of choice to make the diagnosis. Following the drainage of abscess and control of the acute inflammatory process in the abdominal wall, an elective cholecystectomy is advisable in these patients. An open approach is usually favoured, although a laparoscopic technique has been described [6]. However, considering the patient’s age, dense pericholecystic adhesions and co-morbidities, a conservative approach was decided to be appropriate in our case.

4. Conclusion

In conclusion, this case emphasizes that all patients presenting with right-sided abdominal wall suppuration or cellulitis need to be investigated thoroughly for underlying pathology, particularly on a background of calculous biliary tract disease. A high degree of suspicion of this rare entity is helpful in achieving correct diagnosis preoperatively.

Ethical approval

Approved by Ethical committee of the hospital.

Sources of funding

Nothing to declare.

Author contribution

Corresponding and first author were responsible for study concept and design and clinical details collection and data analysis and discussion of the topic. The other two reviewed the article and study design. Approved by all in the last.

Conflicts of interest

Nothing to declare.

Guarantor

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Registration of research studies

Just a case report, no study was conducted on humans.

Consent

Done as requested.

Source of support

None.

Presentation at a meeting

Departmental meeting.

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