Journal of Surgical Techniques and Procedures

Case Report
Published: 08 Nov, 2024

An Unusual Complication of a Cholecystostomy

Fahey Niall, Burvill Ashleigh and Thirunavukkarasu Palan*

Department of Colon Surgery, St. John of God Midland, Ireland

Abstract

Cholecystocutaneous Fistulas (CCF) are rarely seen in today's practice. They have been documented as early as the 1600s but they were seen as a complication of acute cholecystitis at this time. Nowadays this is a rare occurrence due to easy access to imaging, antibiotics and surgery.

This case also shows the alternative treatment options for a cholecystocutaneous fistula. Because our patient was too unwell and comorbid for a cholecystectomy, we had to rethink our management plan. A simple incision and drainage can treat the initial sepsis but it is unlikely to completely resolve the patient's condition. The insertion of a new drain through the fistula treated her biliary sepsis successfully showing an alternative to the standard treatment of a cholecystectomy.

Keywords: Cholecystostomy; cholecystitis; Surgery

Introduction

Cholecystocutaneous Fistulas (CCF) are rarely seen in today's practice. They have been documented as early as the 1600s but they were seen as a complication of acute cholecystitis at this time [1]. Nowadays this is a rare occurrence due to easy access to imaging, antibiotics and surgery. When they do occur, they are most commonly caused by chronic calculus cholecystitis [1]. There have been, however, very few cases of cholecystocutaneous fistula developing along the previous cholecystostomy tract. As of 2019, there were only two cases of Cholecystocutaneous fistulas related to cholecystostomy drains in the literature and after an extensive search I have not been able to find anymore, making this the third documented case [2,3].

Case Presentation

We report the case of an 84-year-old lady who was brought to ED by her family with a 1-day history of lethargy and confusion. She was initially admitted under the medical team due to sepsis of unknown origin with a white cell count of 17.6 and a CRP of 160. Her past medical history is significant for atrial fibrillation, hypertension, aortic stenosis, hypercholesterolaemia, GORD and she had an episode of acute cholecystitis 6 years prior which required a percutaneous cholecystostomy. Repeat examination on the ward by the admitting consultant found a 10cm tender, fluctuant mass in the right upper quadrant of the abdomen. An ultrasound of the area showed a complex fluid collection measuring 60 x 30 x 55mm. The reporting radiologist advised to proceed to a CT scan of the abdomen as the ultrasound was unable to ascertain the deep aspect of the collection. The CT scan found the patient had a large right anterolateral wall collection connecting to the gallbladder (Figure 1A and B).

She was referred to the surgeons at the time of reporting of the CT scan. When we saw her, her observations were within normal limits, but her white cell count had increased to 22 and her CRP was 243. On examination, her abdomen was soft, but she was tender in the right upper quadrant over the fluctuant, erythematous collection.

As there was no biliary obstruction seen on either imaging modality, our working diagnosis was a choleycystocutaneous fistula which developed along the previous fistula tract created by the cholecystostomy.

We brought the patient to theatre the following day for an incision and drainage of the abscess to treat the immediate infection. The cavity extended approximately 10 cm into the subcutaneous space. We washed the cavity out thoroughly and removed over one hundred gallstones lying within the subcutaneous space. The wound was packed and left to heal by secondary intention (Figure 1C and D).

Day three post-op it was noted that bile was coming from the wound, so we returned to theatre for a wound debridement +/- drain insertion +/- Intra-Operative Cholangiogram (IOC) and closure

OPEN ACCESS

Correspondence:
Fahey Niall, Department of Colon Surgery, St. John of God Midland, 1 Clayton Street Ireland, Midland, WA, 6056, Ireland, Tel: +353858512269

Received Date: *22 Oct 2024*
Accepted Date: *04 Nov 2024*
Published Date: *08 Nov 2024*

Citation:
Niall F, Ashleigh B, Palan T. An Unusual Complication of a Cholecystostomy. J Surg Tech Proced. 2024; 8(2): 1072.

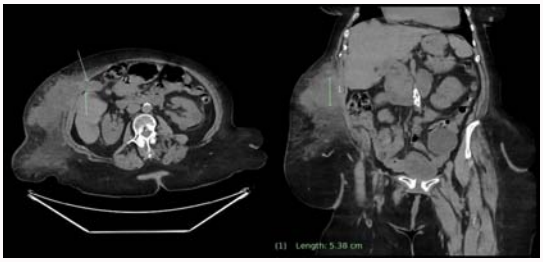

Figure 1A & B: CT findings of the patient's cholecystocutaneous fistula with associated abscess.

Figure 1C: Production of gallstones after an incision and drainage of the patient's abdominal wall.

Figure 1D: Number of gallstones produced from initial incision and drainage.

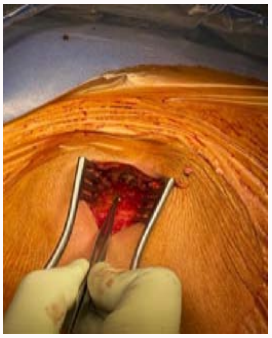

Figure 1E: Base of fistula found during second operation.

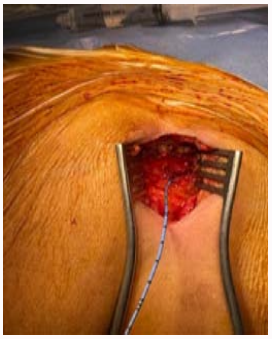

Figure 1F: Foley's catheter inserted into fistula to act as a cholecystostomy.

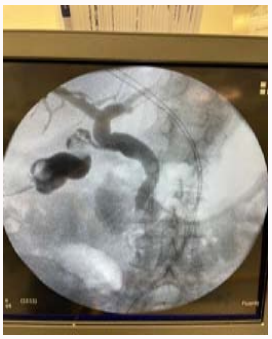

Figure 1G: Intra-operative cholangiogram performed through the Foley's catheter showing no distal obstruction.

of the wound. We dissected down to the base of the wound to find a small fistula connecting the subcutaneous space to the gallbladder. A 12F Foley's catheter was inserted into the opening of the fistula and an intra-operative cholangiogram was performed to confirm we were in the gallbladder (Figure 1E, F and G).

The IOC showed there was good flow into the duodenum with no filling defects which further confirmed our assumption that the gallbladder had fistulated through the old cholecystostomy fistula rather than forming a new fistula secondary to obstruction. The drain was left on free drainage with its output slowly decreasing over the next week. On day seven the drain output was 25mls and her inflammatory markers had normalized while on IV co-amoxiclav. She was discharged day seven post-op with the plan to follow her up in the outpatient's department.

We spigoted the drain 1 week after discharge when the drain output was averaging 12-15 mls per day. Two weeks later she was clinically well with no acute issues since spigoting the drain. It was at this point that we removed the drain and used a simple dressing to cover the wound. One final review 5 weeks post discharge showed that the patient had made a full recovery from her operations and her episode of biliary sepsis.

Discussion

We present the case of an 84-year-old lady who was diagnosed with a cholecystocutaneous fistula which developed along the pre-existing tract of a cholecystostomy drain years after removal. As already stated, this is only the third case of CCF associated with a percutaneous cholecystostomy in the literature [2,3].

Our case differs significantly from the other two cases as our patient was deemed too unfit for the definitive treatment of a cholecystectomy. Because the option of a definitive surgery was not available, we decided to treat the immediate sepsis with a simple incision & drainage. At the time of the initial operation, we knew that we would need to return to theatre at some point as she had a CCF. We then put a drain through the fistula to effectively act as a new cholecystostomy to drain any ongoing sepsis while simultaneously

treating with antibiotics. As you can see, the patient had a very good outcome.

The other major difference when compared to the other two cases is the timeline. Our patient presented six years after her initial cholecystostomy compared to the other two cases which presented within one year. Going forward we must always be aware of abdominal abscesses in patients who have had a previous cholecystostomy.

Conclusion

This case shows that cholecystocutaneous fistulas can present themselves at a much later period than has been previously shown in the literature. Although it is a rare complication, particularly so long after drain insertion, we must always consider it as a differential diagnosis in a patient who has had a previous cholecystostomy.

This case also shows the alternative treatment options for a cholecystocutaneous fistula. Because our patient was too unwell and comorbid for a cholecystectomy, we had to rethink our management plan. A simple incision and drainage can treat the initial sepsis but it is unlikely to completely resolve the patient's condition. The insertion of a new drain through the fistula treated her biliary sepsis successfully showing an alternative to the standard treatment of a cholecystectomy.

References

1. Brimo Alsaman MZ, Mazketly M, Ziadeh M, Aleter O, Ghazal A. Cholecystocutaneous fistula incidence, Etiology, Clinical Manifestations, Diagnosis and treatment. A literature review. Ann Med Surg. 2020:59:180-5.
2. Lofgren DH, Vasani MD S, Singzon MD V. Abdominal wall abscess secondary to cholecystocutaneous fistula via percutaneous cholecystostomy tract. Cureus. 2019;11(4):e4444.
3. Pripotnev S, Petrakos A. Cholecystocutaneous fistula after percutaneous gallbladder drainage. Case Rep Gastroenterol. 2014;8(1):119-22.