

Case Report

An Unusual Incarcerated Port Site Hernia due to retained partial gall bladder with stones - A case report.

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Abstract

A 50 years old lady presented to the Emergency department with what appeared to be a strangulated infraumbilical hernia. She was explored and found to have an unexpected, unusual diagnosis -- incarcerated port site hernia with early features of strangulation. There was fundic part of gall bladder loaded with stones in the center of hernial contents. Gall bladder was surrounded by inflamed pad of omentum. The defect and the mass was approximately 6-8 cm below the umbilical port site incision scar of laparoscopic cholecystectomy, performed 13 years back. Excision of the inflamed hernial contents and Herniorraphy was performed. Patient recovered completely. Complications related to introduction of ports and incomplete removal of gall bladder may present in various ways and sometimes many years after the primary surgery. Methods of reducing the risk of such complications and pathogenesis of hernia in this case are discussed.

Keywords: Laparoscopy, hernia, umbilical port, gallbladder.

Background

Laparoscopic cholecystectomy has become the treatment of choice for patients with symptomatic cholelithiasis since it was first performed in 1987¹. This surgery has been accompanied by an increasing occurrence of unusual complications that require recognition and treatment. Among them, reported are-incarcerated indirect inguinal hernia due to spilled gall stones², port site abdominal wall large abscess, presented

as hernia³ etc. Our case report highlights one of such complications, probably the **first reported case** in the literature and serves to remind the readers regarding unusual complications that one should always consider in patients who have had previous gall bladder surgery. It is hoped that this report might encourage further study of this subset of complications as well as reminding the readers to diagnose when faced with such patients in the future.

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Case Report

A 50 years old lady (HN:R 011207008957,VN:V 011208563760) presented to the Emergency department describing occasional pain in the central lower abdomen for 2 years and appearance of swelling in that area for 6-7 months. Initially, the swelling used to get reduce at its own, but for the last 15 days it became irreducible and the patient developed continuous dragging pain which became unbearable for the last 2-3 days. There was no history of trauma, fever or any gastrointestinal symptoms. She underwent Laparoscopic cholecystectomy near about 13 years back in a medical institute, Dhaka. The details of the operative procedure and findings were not available. On examination, she looked sick and had tachycardia with slightly raised temperature. Abdominal examination revealed well healed four port sites scars of previous Laparoscopic cholecystectomy. A 14 x 10 x 8 cm, erythematous, irreducible, tender mass was present in the infraumbilical region, midpoint between the umbilicus and pubis. It seemed to be incarcerated infraumbilical hernia with early features of strangulation.

Investigations

Except elevated total leukocyte counts (of $12.25 \times 10^9/L$), all other routine tests were within normal limits.

Histopathology- Gall bladder mucosa is ulcerated, has many lymphocytes, histiocytes, foamy macrophages. Serosa shows congested blood vessel, inflammatory cellular infiltration. outside serosa-there is omental tissue with inflammatory cells.

Differential Diagnosis

Chronic abscess due to stone fragments, Desmoid tumor, Strangulated hernia.

Treatment, Outcome And Follow Up

The patient was admitted, given intravenous antibiotics (Ceftriaxone and Metronidazole) and prepared for surgery. At operation, there was approximately 12 x 10 x 8 cm inflammatory mass in the subcutaneous layer of anterior abdominal wall, which was ill-defined and densely adhere with the immediate surrounding subcutaneous tissue, mostly at this superior margin, causing difficulty in approaching the sheath. There was a 2 x 2 cm defect in the infraumbilical region located at the midpoint between umbilicus and pubis in the midline. This defect was very much tough and tight due to chronic fibrotic tissue. The sac was identified and mobilized all around subcutaneously with great difficulty. Neck of the hernia was divided to get hold of

the entire mass. Sac opened; the content of the sac was densely adhere with it and inseparable. There were areas of necrosis in the omentum and also mild dirty fluid collection in pockets of the sac. The entire mass was resected out (Figure.1)and on dissection of the specimen, rare findings were noted- there was fundic half of the gall bladder in the center (packed with stones) maintaining it's outline and was in separable from the surrounding adhered omentum. (Figure.2) The patient's offspring identified the stones as they were given similar stones at her laparoscopic cholecystectomy surgery. Patient had uneventful recovery and was discharged after 5 days of antibiotic therapy. She was doing well at 6 months follow-up.



Figure.1----Excised subcutaneous Omental mass.



Figure 2-Dissection(cut open) of the omental mass revealed part of gall bladder in the centre, packed with stones,surrounded by dense, inflamed omentum.

Discussion

Laparoscopic cholecystectomy complications include those of laparoscopy and of cholecystectomy⁴. During laparoscopic cholecystectomy, the gall bladder may be torn by the penetrating bites of the grasping instruments or sheared by to and fro traction on the gall bladder wall as it is moved to enhance exposure at the time of dissection. During removal of gall bladder, stone spillage may occur due to forced delivery of a freed, tense gall bladder⁵ through the small port; even part of the gall bladder may also remain in the port site of anterior abdominal wall that has happened to our patient.

Probable pathogenesis of our patient's hernia :

while introducing umbilical port, the trocher and sheath might have traveled downwards in the pre-peritoneal space for a distance away from the original umbilical port site incision before entering into the peritoneal cavity. These two points of entry of the port made difficult angles with the peritoneum and skin that caused difficult delivery of the gall bladder. Therefore, the entire gall bladder could not be retrieved. Surgeon also might not have checked the retrieved specimen. Therefore fundic part of the gallbladder with stones remain in the port site tunnel. This remaining part of gall bladder and the stones in it caused chronic inflammation locally and did not allow the peritoneal entry point to heal. That ultimately led to the development of hernia. Initially it was reducible, later it became incarcerated and developed local infection presented as strangulated hernia.

Methods Of Reducing Such Complications

- Entry points (Skin & Peritoneum) of the port should not be far away from one another. umbilical port insertion or introduction through open method is recommended.
- Checking of the retrieved specimen should be done carefully.
- Thorough cleaning of the port site to avoid stone retention.
- Proper closer of the sheath.

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