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 inflammed 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 inflammed 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 contineous 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,
irredeible, 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 x
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.
Discussion
Laparoscopic cholecystectomy complications include those of laparoscopy and of cholecystectomy. 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 bladder 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 leaded 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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References