

Post Laparoscopic Cholecystectomy Ascites: An Unusual Complication

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Citation

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Abstract

Ascites immediately following laparoscopic cholecystectomy is an extremely rare complication. Occasionally, no definitive aetiology can be ascertained despite a meticulous work-up. In such cases, idiopathic, allergic or an abnormal inflammatory peritoneal reaction may be the ultimate diagnosis. We present a case of ascites following a laparoscopic cholecystectomy presumed to be caused by a reaction to diathermy, and discuss its management.

INTRODUCTION

Ascites following laparoscopic cholecystectomy is an extremely uncommon event. Its exact mechanism is unknown, though an allergic or inflammatory peritoneal reaction has been described.¹ It is imperative that serious, or life threatening conditions, for example bile duct or other visceral injuries are excluded. Under such circumstances, following a meticulous intra-abdominal search, an idiopathic allergic or inflammatory peritoneal reaction may be the final diagnosis. We present an unusual case of ascites, presumed to be secondary to diathermy following a routine, elective laparoscopic cholecystectomy and discuss its management. To our knowledge, this is the first reported such case in the medical literature.

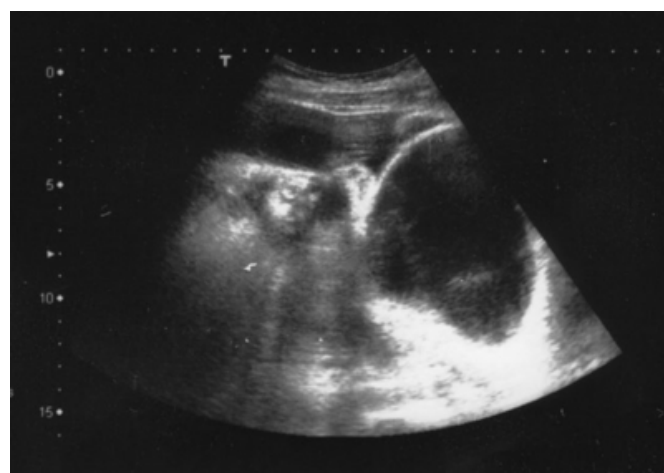
CASE REPORT

A 31-year-old lady, 7 months post partum, who had a strong allergic history to a variety of allergens, including pollen, dust, fur, scent, feathers and animals, requiring daily oral and nasal antihistamines, underwent a laparoscopic cholecystectomy for cholelithiasis. The operation was performed in a routine manner; establishing a carbon dioxide pneumoperitoneum using Hasson's technique with a 10mm subumbilical port for telescope, a 10mm epigastric port, and two 5mm ports placed in the right lower and right upper quadrants for ancillary instruments. The operation was uneventful with no bile spillage or stone extrusion. The following day, the patient developed abdominal pain refractory to analgesics with an associated mild abdominal distension. Physical examination revealed tenderness in all four abdominal quadrants with shifting dullness on

percussion. Bowel sounds were present and normal sounding. Full blood count, including an eosinophil count, and biochemistry tests were normal. An abdominal ultrasound scan revealed a large quantity of fluid within the abdominal cavity, which raised the possibility of either an intra-abdominal haemorrhage or a bile leak (fig1).

Figure 1

Figure 1: Ultra sound scan showing moderate ascites



The patient was afebrile. She was initially hypotensive, but this responded to one litre of intravenous crystalloid solution. An abdominal and a chest X-rays taken at this time, showed an abdominal fluid level and free air under diaphragm most likely related to the previous laparoscopy (fig2).

Figure 2

Figure 2: Abdominal X-ray showing fluid level and mild small bowel ileus



The patient underwent immediate repeat laparoscopy, utilising the previous port site incisions. This repeat laparoscopy revealed a large volume of clear abdominal free fluid. There was no obvious bile staining, blood or any other visceral injury, despite a meticulous examination. A Robinson's abdominal drain was sited laparoscopically in the right upper quadrant. This drained a total of two litres of clear fluid, over the following three days, 1200ml on the first post operative day, 760 ml on the following day and finally 40ml prior to discontinuing the drain. Patient was discharged on the fifth postoperative day. We did not prescribe either antihistamines or steroids. The ascitic fluid contained inflammatory and mesothelial cells only. The ascitic fluid was sterile on culture, with no WBC's, organisms or abnormal cells seen on microscopy. The protein content was 40g/dl, consistent with exudative fluid. The abdominal fluid was not thought to be chyle as macroscopically the fluid was very clear and no dissection was made near the thoracic duct.

DISCUSSION

This was an unusual case of ascites, which developed

without any obvious cause. The medical background of a strong allergic history is the only pointer as to a reason why an exudative ascites occurred after a routine, uneventful laparoscopic cholecystectomy. There was presumably an allergic or an abnormal peritoneal reaction to the diathermy. No definite aetiological factor was identified despite a thorough search. The use of diathermy is postulated as the cause of the ascites because it was the only factor that was not reproduced during the second exploratory laparoscopy. The same style and make of port was used the second time along with a carbon dioxide pneumoperitoneum. An allergic reaction to the titanium cystic duct clips is unlikely as the ascites settled with them remaining in-situ.

The only other recorded cases of ascites involve an allergic or inflammatory reaction related to the use of methylene blue following diagnostic laparoscopy and chromopertubation.² Post laparoscopic cholecystectomy ascites, although rare, is a difficult problem and needs to be a diagnosis of exclusion. Initial efforts must be directed to eliminate life threatening haemorrhage and bile duct or bowel injury. Peritonitis secondary to bowel injury, in particular is associated with substantial mortality,³ so must be actively sought and excluded with repeat laparoscopy or radiological imaging if necessary. If, with a careful search, no underlying injury is detected, such as in this case, one could surmise that an idiopathic peritoneal reaction possibly related to diathermy use is the final diagnosis, with a note placed in a prominent position on the patient's medical notes. The placement of an abdominal drain laparoscopically, along with careful and regular observation is a reasonable treatment.

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