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Case Report

Spontaneous chylous ascites after laparoscopic cholecystectomy: a case report

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ABSTRACT

Cholecystitis with cholelithiasis is a very common disease in clinical practice. Now a days it is treated by laparoscopic cholecystectomy very safely with minimal trauma, discomfort and short hospital stay. Rarely, it is complicated by post-operative chyle leakage in peritoneum. We present a case of spontaneous chylous ascitis after laparoscopic cholecystectomy. Probably idiopathic or caused by trauma of pneumoperitoneum, abnormal peritoneal reaction to various chemicals released during operative procedure and diathermy used during laparoscopic cholecystectomy. We discuss its review, clinical presentation, diagnosis, treatment and management of this case. Chyle leake is rare post-operative complication can be managed by simple conservative treatment.

Keywords: Chyle leake, Cholecyctectomy, Cholelithiasis, Postoperative complication

INTRODUCTION

Chylous ascitis refers to collection of milky creamy fluid rich in triglyceride content above200 mg/dL and rich in small lymphocytes in peritoneal cavity.[1,2]

Chylous ascitis without any other disease is extremely rare complication of laparoscopic cholecystectomy, only few cases are reported till date.[3,4] It is frequently idiopathic.[5] Chylous ascitis is characterized by lymphatic fluid drainage in abdominal cavity which can cause peritoneal irritation and present as abdominal distention, pain, fever and other features of acute abdomen.[6] After clinical, radiological examination, final diagnosis is made by biochemical examination of ascetic fluid for chyle. We present a case of acute chylous ascitis which developed just after laparoscopic cholecystectomy. Relaparoscopy failed to reveal any intra-abdominal pathology except presence of chyle in peritoneal cavity. We discuss its clinical presentation, diagnosis and management.

CASE REPORT

A 54 year old lady was admitted for laparoscopic cholecystectomy, full blood count, including eosinophil count and biochemical tests were normal. The operation was uneventful, patient was shifted to post-operative ward and gall bladder biopsy was sent to pathology department for histopathology. Patient was on glucose saline drip with antibiotic coverage. Just after 72 hours at time of discharge of patient, during dressing leakage was seen from the sutures of cholecystectomy. This leakage increased with time and soaked dressing which was changed repeatedly, patient developed fever, pain and distension abdomen with shifting dullness on percussion. MRI was done which raveled fluid in peritoneal cavity

with free air under the diaphragm; this free air could be the leftover air of the pneumoperitoneum.[7]

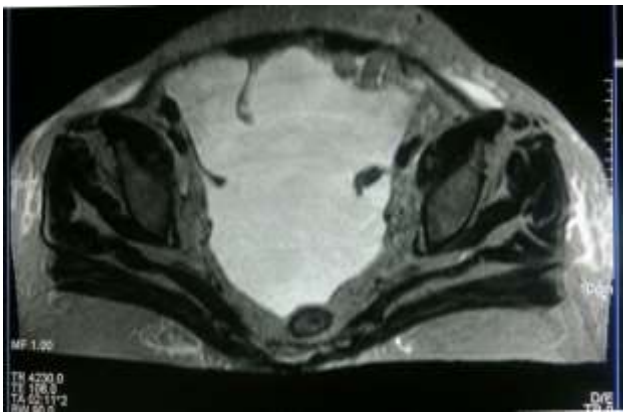

Figure 1: MRI abdomen.

Urgent relaparoscopic surgery was done from the same port of entry; it showed milky fluid in peritoneal cavity present in sub hepatic, intestinal and pelvic area.

Figure 2: Chyle in peritoneal cavity.

A small leak was suspected in sub hepatic area adjacent to the embedding site of gall bladder but exact site of leakage was not seen for repair. There was no evidence of any other abdominal injury. 1400 ml of milky fluid was removed by suction and drain was placed in the right upper quadrant. The fluid was sent to pathology and microbiology department.

Microbiological culture of fluid was sterile. Biochemical analysis showed protein 5.1 gm/cent, very high triglyceride values (737.4 / mg%) and plenty of small lymphocytes (669 cells/ml, 98% lymphocytes) along with occasional macrophage and mesothelial cells. Malignant cells were not seen in the ascetic fluid smears. ADA test was negative (5.2U/L). The diagnosis of chyle in the ascetic fluid was confirmed.

Patient was nil orally and was on glucose saline drip with broad spectrum. The patient was on complete bed rest. Additional subcutaneous injection of sandostatin (100 mcg) was given, but within 20 minutes reddish erythema developed at the site of injection therefore second dose of sandostatin was not given and this therapy was discontinued. Similarly patient was not able to tolerate parental nutrition and developed rigor so this therapy was also discontinued. The glucose saline drip along with parental multivitamins, B complex and broad spectrum antibiotics continued and 900 ml of fluid was drained in 24 hours; this remained nearly same on third day. Stool was not passed but mild bowel sounds were present. After third day fat free fluids like soup and fruit juices were started orally. The conservative treatment continued and there was decrease in the amount of chyle drainage being 400 ml on fourth day. On fifth day fat free solids were allowed like meshed boiled potato, boiled rice and cereals etc. along with soya bean powder and sattu (Indian flour made of roasted wheat, gram and jao i.e. oat), this was well tolerated by patient. Normal stool was passed on 6th day. Patient was still on total bed rest and glucose saline and other parental drugs. On 8thday parental therapy was stopped and replaced by oral supplementation of minerals, vitamins like folic acid, B complex and other fat soluble vitamins but fat free diet and rest continued. This regime continued with per day average drainage of 100 ml chylous fluid for next 3 days. The drainage amount continued to decrease, suddenly and very abruptly the drainage of chyle stopped on 15th/16^{th,} day of re-laparoscopy. Repeat abdominal ultra sound was done which showed residual fluid in peritoneal cavity and drain was removed. The patient remained well, started tolerating low fat diet with normal bowel habits. Patient was discharged on 19th day of repeat surgery. Fat free or low fat diet for one month was advised after discharge.[8] No exact time of follow up is advised in literature; we advised follow up of at least 6 months to detect potential etiological factors and recurrence.

DISCUSSION

Post laparoscopic cholecystectomy spontaneous chylous ascitis is a rare clinical condition, defined as abrupt collection of chylous fluid in peritoneal cavity. Its incidence is increasing due to increase in type and number of surgical especially laparoscopic interventions.[5] Chylous ascitis may be due to other factors like trauma, chronic liver diseases, tuberculosis, filariasis, different peritoneal infections, and extended lymph node dissections etc.[8]

Cholecystitis with cholelithiasis is a very common disease in clinical practice. Now a days it is treated by laparoscopic cholecystectomy very safely with minimal trauma, discomfort and short hospital stay. Rarely, it is complicated by post-operative chyle leakage in peritoneum.[3, 4] Although chylous ascitis is also reported in post open cholecystectomy cases especially if complicated.[9] This indicates that there may be a common factor in both the methods of cholecystectomy like leakage and trauma during retraction of gall bladder from the embedding site in liver and use of diathermy.[3] This

may be the effect of others like pressure of pneumoperitoneum during laparoscopic surgery effecting increase in systemic vascular pressure/ systemic vascular resistance and release of catecholamine.[10] The effect of personal sensitivity may be important contributing factor.[3]

Since patient showed many sensitive reactions to various drugs used during therapy, the chances of personal sensitivity appear to be the prime culprit of this complication of post-operative chylous ascitis. The patient responded well to conservative treatment and was discharged asymptomatic with advice of follow up for 6 months.

CONCLUSION

Spontaneous post laparoscopic cholecystectomy chylous ascitis is an extremely rare post-operative complication. If close and careful follow up is done, this rare and serious complication can be controlled and treated by simple conservative treatment and reserving surgical intervention for refractory cases.

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