

Case Report

Chylous Ascites

Siva K Talluri, MD., FACP., Harish Nuthakki, MD., Ashvin Tadakamalla, MD., Jyothisna Talluri, MD., Siddesh Besur, MD.

Department of Internal Medicine, Michigan State University Internal Medicine Residency Program
McLaren Regional Medical Center, Flint, Michigan, USA.

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Abstract

Context: Chylous ascites is the accumulation of milky chyle in the peritoneal cavity. Chylous ascites has been reported after surgeries like abdominal aortic aneurysm repair, radical gastrectomy, duodenectomy, nephrectomy and Wilm's tumor resection. Our literature search did not reveal any reports of chylous ascites after a gastric ulcer resection. We report about an elderly woman with a rare complication of chylous ascites after an emergent surgery for a perforated gastric ulcer. **Case Report:** A 70-year-old woman developed sudden respiratory distress on 5th post-operative day after an elective C3-C7 cervical discectomy and fusion. Her past medical history was significant for cervical spondylosis. The Computed Tomography (CT) scan of the chest revealed air under the diaphragm suspicious for hollow viscus perforation. She underwent an emergent surgery for drainage of hematoma in the neck along with an emergent laparotomy to repair a large perforated gastric ulcer distal to the gastro-esophageal junction. The patient had worsening of abdominal distention on 4th post-operative day. The CT scan of abdomen showed fluid collection in the abdomen. The abdominal drain revealed large amount of serous milky fluid at the rate of 1500 ml per day. The fluid analysis showed that the triglyceride level was 170 mg/dl and cholesterol level was 15 mg/dl. The fluid cultures did not grow any organism. She responded to treatment with octreotide and a diet of medium chain triglyceride oil. **Conclusion:** Any obstruction or damage to the lymphatic channels results in chylous ascites. Lymphomas, metastatic malignancies, and abdominal surgeries commonly cause chylous ascites. Ascitic fluid triglyceride level greater than 110 mg/dl is diagnostic of chylous ascites. Chylous ascites is a rare complication of a peptic ulcer resection which can be managed effectively with octreotide.

Keywords: Ascites, chyle, chylous ascites.

Correspondence to: Dr. Siva K Talluri, MD., FACP., Clinical assistant professor, Department of Internal Medicine, Michigan State University Internal Medicine residency program, McLaren Regional Medical Center, Flint, Michigan, USA. Tel.: 810-342-5800, Fax: 810-342-5810, Email: talluri1@msu.edu

Introduction

Chylous ascites is the accumulation of milky chyle in the peritoneal cavity. Chylous ascites has been reported after surgeries like abdominal aortic aneurysm repair, radical gastrectomy, duodenectomy, nephrectomy and Wilm's tumor resection. Our literature search did not reveal any reports of chylous ascites after a gastric ulcer resection. We report about an elderly woman with a rare complication of chylous ascites after an emergent surgery for a perforated gastric ulcer.

Case Report

A 70-year-old woman developed sudden respiratory

distress on 5th post-operative day after an elective C3-C7 cervical discectomy and fusion. Her past medical history was significant for cervical spondylosis. The Computed Tomography (CT) scan of the neck revealed hematoma in the neck. CT of the chest revealed air under the diaphragm suspicious for hollow viscus perforation.

The patient underwent an emergent surgery for drainage of hematoma in the neck along with an emergent laparotomy to evaluate for a hollow viscus perforation. A large perforated gastric ulcer distal to the gastro-esophageal junction was resected and a modified graham patch was placed. The patient had worsening of abdominal distention on 4th post-operative day after the repair of perforated

gastric ulcer.

The CT scan of abdomen showed fluid collection in the abdomen (Figure 1). The abdominal drain revealed large amount of milky fluid at the rate of 1500 mL per day (Figure 2). The ascitic fluid analysis showed that the triglyceride level was 170 mg/dL and cholesterol level was 15 mg/dL. The fluid cultures were negative for growth of any organism. She responded to treatment with octreotide and a diet of medium chain triglyceride oil. The abdominal drainage decreased from 1500 mL per day to 700 mL per day.

The hospital stay was complicated by sepsis. The patient recovered and was discharged home in a stable condition and did not have any ascites at discharge.



Fig. 1 Computed Tomography (CT) of the abdomen showing chylous ascites with a drain



Fig. 2 Gross appearance of chylous fluid

Discussion

Any obstruction or damage to the lymphatic channels results in chylous ascites [1]. Lymphomas, metastatic malignancies, and abdominal surgeries, infections like tuberculosis commonly cause chylous ascites [2, 3].

Abdominal distention is the most common symptom as seen in our patient. Ascitic fluid triglyceride level greater

than 110 mg/dl is diagnostic of chylous ascites. Gross appearance of the ascitic fluid corresponds poorly with absolute triglyceride levels because turbidity also reflects the size of the chylomicrons. Ascitic fluid glucose and amylase levels usually are normal and cholesterol level usually is low. A high total leukocyte count ranging between 232-2560 cells/mm³ with marked lymphocytic predominance is seen. Total protein content varies from 1.4-6.4 g/dL, with a mean of 3.7 g/dL.

Symptoms can be relieved by measures like repeated paracentesis, diuretic therapy, salt and water restriction, elevation of legs and use of supportive stockings. Our patient had an abdominal drain; had salt and fluid restriction.

A diet with medium-chain triglyceride decreases the drainage of chyle into the lymphatics [4]. Orlistat has also been successfully used as an alternative to low fat diet [5]. Lymphatic vessels of the intestine have somatostatin receptors. Octreotide, a somatostatin analog, at a dose of 100 mcg subcutaneously thrice daily is used in the management of chylous ascites [6-8]. Octreotide at 50mcg/hour decreased the ascitic drainage in our patient by 50%. Our patient was successfully treated with octreotide and a diet with medium chain triglycerides

Peritoneovenous shunting is an alternative treatment in a small number of patients but shunt failure is common [9]. Our patient was managed conservatively without any operative intervention.

Sepsis is the most common complication reported. Our patient's hospital course was complicated by sepsis due to *Serratia Marcescens* and successfully treated with piperacillin-tazobactam. The prognosis depends on the treatment of the underlying disease or cause of chylous ascites.

Conclusion

Chylous ascites is a rare complication of a gastric ulcer resection which can be managed effectively with octreotide.

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