

INTRODUCTION

Chylous ascites is characterized by the accumulation of lymphatic fluid in the peritoneal cavity. The most common causes of chylous ascites in developed countries are abdominal malignancy, lymphatic abnormalities, and cirrhosis; but tuberculosis and filariasis accounts for the majority of cases in developing countries. We report a rare case of chylous ascites caused by alcoholic liver cirrhosis controlled by octreotide.

CASE REPORT

- A 57-year-old man with a history of chronic alcoholism was seen for gradual worsening of abdominal and bilateral leg swelling. Physical examination revealed abdominal distension, shifting dullness and bilateral lower extremity edema.
- Paracentesis was performed with the removal of 8 liters of milky fluid. Analysis of the fluid showed serum-ascites albumin gradient (SAAG) of >1.1 and elevated triglyceride level (157mg/dl). Cytological and microbiological examination was negative for malignancy and tuberculosis, respectively. A computed tomography scan of the chest and abdomen showed cirrhosis and no malignancy was found.



- Patient diagnosed with chylous ascites secondary to alcoholic liver cirrhosis. Despite medical management with low salt diet, furosemide and spironolactone; patient required a second paracentesis after 7 days with the removal of 4 liters of milky fluid. Analysis of the fluid again revealed SAAG of >1.1 and elevated triglyceride level (229mg/dl).
- Octreotide was started at 100 microgram subcutaneous three times a day. Patient's ascites was controlled and the patient required only one repeat paracentesis over 6 months of follow-up.

Characteristics of Ascitic Fluid in Chylous Ascites

Color	Milky and cloudy
Triglyceride level	Above 200 mg/dL
Cell count	Above 500 (predominance of lymphocytes)
Total protein	Between 2.5–7.0 g/dL
SAAG	Below 1.1 g/dL*
Cholesterol	Low (ascites/serum ratio <1)
Lactate dehydrogenase	Between 110–200 IU/L
Culture	Positive in selected cases of tuberculosis
Adenosine deaminase	Elevated in cases of tuberculosis
Cytology	Positive in malignancy
Amylase	Elevated in cases of pancreatitis
Glucose	Under 100 mg/dL

IU = international units; SAAG = serum-ascites albumin gradient.

* Is elevated above 1.1 g/dL in chylous ascites secondary to cirrhosis.

DISCUSSION

- Reported incidence of chylous ascites in cirrhotic patient is 0.5 to 1%.
- Mechanism of formation of chylous ascites in cirrhosis is poorly understood but can be explained by leakage of lymph due to rupture of dilated serosal lymphatic channels secondary to excessive lymph flow (around 18-20 liters/day).
- Diagnosis of chylous ascites can be confirmed by high triglyceride level of > 110 mg/dl in the ascitic fluid or elevated ascites-plasma triglyceride ratio of $> 2:1$.
- Reduction of Lymph formation and reduction of portal pressure should be the aim of management.
- Octreotide works by reducing portal pressure by inhibiting glucagon and other intestinal peptides mediated splanchnic vasodilatation.
- Long term use of octreotide can reduce the formation of chylous ascites and it can even stop formation of ascites by helping repair of ruptured lymphatics.

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