December 2014

Chylous Ascites Secondary to Alcoholic Cirrhosis: Controlled with Octreotide

Parag Brahmbhatt MD  
ETSU Dept. of Internal Medicine, brahmbhatt@etsu.edu

Antwan N Atia  
Aurora Health Care, antwan.atia@yahoo.com

Pranav Patel MD  
ETSU Dept of Internal Medicine, drpranavpatel@yahoo.com

Bhaesh Barad MD  
ETSU Dept of Internal Medicine, drbhaveshbarad@gmail.com

Amanda Vanlandingham DO  
ETSU Dept. of Internal Medicine, VANLANDINGHA@mail.etsu.edu

See next page for additional authors

Follow this and additional works at: http://ejournal.tnmed.org/home

Part of the Other Medical Sciences Commons, Substance Abuse and Addiction Commons, and the Urology Commons

Recommended Citation

Brahmbhatt, Parag MD; Atia, Antwan N; Patel, Pranav MD; Barad, Bhaesh MD; Vanlandingham, Amanda DO; and Murthy, Ravindra MD (2014) "Chylous Ascites Secondary to Alcoholic Cirrhosis: Controlled with Octreotide," Tennessee Medicine E-Journal: Vol. 1: Iss. 1, Article 5.  
Available at: http://ejournal.tnmed.org/home/vol1/iss1/5

This Article is brought to you for free and open access by Tennessee Medicine e-Journal. It has been accepted for inclusion in Tennessee Medicine E-Journal by an authorized administrator of Tennessee Medicine e-Journal.
Chylous Ascites Secondary to Alcoholic Cirrhosis: Controlled with Octreotide

Authors
Parag Brahmbhatt MD, Antwan N Atia, Pranav Patel MD, Bhaesh Barad MD, Amanda Vanlandingham DO, and Ravindra Murthy MD
Chylous Ascites Secondary to Alcoholic Cirrhosis: Controlled with Octreotide
Parag Brahmbhatt, MD; Antwan Atia, MD; Pranav Patel, MD; Bhavesh Barad, MD; and Amanda Vanlandingham, DO; Ravindra Murphy, MD; and Mark Young, MD

Corresponding Author: Parag Brahmbhatt, MD
Email: dr8382@gmail.com

ABSTRACT
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 case of chylous ascites caused by alcoholic liver cirrhosis controlled by octreotide.

Key Words: Chylous ascites, Octreotide, Alcoholic cirrhosis

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 was 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. Patient’s ascites is currently controlled with octreotide 50 microgram subcutaneous two times a day.

DISCUSSION
Chylous ascites is defined as the extravasation of milky or creamy appearing peritoneal fluid rich in triglycerides, caused by the presence of thoracic or intestinal lymph in the abdominal cavity.1

Etiology of chylous ascites differs between developed and developing countries. While abdominal malignancy and cirrhosis are two most common causes of chylous ascites in western countries, tuberculosis and filariasis are responsible for majority of cases in developing countries. Other causes includes congenital, post-operative and traumatic.1

Reported incidence of chylous ascites in cirrhotic patient is about 0.5 to 1%.2,1 Mechanism of formation of chylous ascites in cirrhosis is poorly understood but has been described in the literature. Proposed mechanism is that patients with cirrhosis have high lymph flow due to sinusoidal and post sinusoidal portal hypertension. Because of this constant high flow, lymphatic vessels ruptures resulting in leakage of lymph which leads to development of Chylous ascites.3

As mentioned earlier etiology of chylous ascites is different in developed and developing countries. Abdominal malignancy and cirrhosis are two most common causes of chylous ascites in western countries.
Diagnosis of chylous ascites can be confirmed by high triglyceride level of $> 200\text{mg/dl}$ (some authors suggest $>110\text{mg/dl}$) in the ascitic fluid or elevated ascites-plasma triglyceride ratio of $> 2:1$.\(^1\)\(^,\)\(^3\)

The aim of management for chylous ascites secondary to alcoholic cirrhosis should be reduction of lymph formation and reduction of portal pressure. Initial approach should be dietary modification using low fat diet along with medium chain triglycerides supplements. It has been recommended to use combination of diet modification and diuretics such as spironolactone in patient with cirrhosis.\(^1\) While repeated paracentesis is required in most patient with cirrhosis for symptomatic relief, the literature has described successful use of octreotide in controlling ascites formation in these patients.\(^2\)\(^,\)\(^3\) Octreotide has been used successfully in the treatment of iatrogenic as well as congenital chylothorax and chyloperitonium and malignant chylous effusions.\(^4\)\(^,\)\(^5\)\(^,\)\(^6\) Octreotide is a synthetic analogue of somatostatin and works by reducing portal pressure by inhibiting glucagon and other intestinal peptides mediated splanchnic vasodilatation.\(^3\) 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.\(^2\)\(^,\)\(^3\) Some authors recommends to use octreotide as first line treatment of cirrhotic chylous ascites.\(^2\)

CONCLUSION
We report a case of successful use of octreotide in controlling chylous ascites secondary to alcoholic cirrhosis. Although there is no data suggesting its mortality benefit, it can reduce the morbidity by avoiding or minimizing frequent paracentesis and hospitalizations.

References: