



**CHYLOUS ASCITIS - PRESENTING FEATURE OF ALCOHOLIC CIRRHOSIS: A RARE CASE REPORT**

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**ABSTRACT**

Chylous ascites is a rare cause of ascites resulting from the accumulation of lymph in the abdominal cavity. It is a rare presentation in cirrhotic liver disease but its incidence has increased because of thoracic and abdominal surgeries. We report here a case presenting with spontaneous chylous ascites in alcoholic cirrhosis of liver.

**KEYWORDS:** chylous ascites, alcoholic, cirrhosis.

**INTRODUCTION**

Chylous ascites is the accumulation of a milky coloured peritoneal fluid rich in triglycerides due to the presence of thoracic or intestinal lymph in the abdominal cavity. Most common causes are abdominal malignancy and cirrhosis in western world where as tuberculosis one of the leading causes in developing countries.<sup>[1]</sup> Clinical diagnosis is easily made by the look of milky and creamy fluid with fat (triglyceride) content above 110mg/dl. Spontaneous development of chylous ascites in patients with cirrhosis has a documented incidence of only 0.5%.<sup>[2]</sup> There is only few reporting of such case from India.

**The Case**

A 52 years old tribal male was admitted at sawangi teaching Hospital, attached with Jawahar Lal Nehru medical college Wardha for evaluation and management of progressive abdominal distension for 6 months. He was also having anorexia, lack of appetite and weight loss. There was no history of fever, altered sensorium, melena or hematemesis. He had history of pulmonary tuberculosis 20 year back taken complete anti tubercular treatment. He was chronic and regular alcoholic with consumption of locally made alcohol which he left about 6 months back. He was non smoker. He denied any history of diabetes, hypertension or ischemic heart disease.

On examination he was lean and thin male with BMI of 17.6kg/m<sup>2</sup>. Vitals at the time of presentation were: BP of 100/60mmHg in right arm supine position, Pulse=88/min, regular, normal volume, respiration rate=22/min, regular. Jugular venous pressure was normal. Icterus was absent. Other positive clinical findings were pedal edema, ascites, prominent superficial

abdominal veins (direction of blood flow-away from umbilicus), mild hepatomegaly with irregular border and splenomegaly. Patient was undergone peritoneal fluid tapping which revealed gross milky fluid (Fig.1).

Laboratory work-up upon admission showed: haemoglobin 9.2 g/dl, leukocytes count 5,700 with 70% neutrophils, 24% lymphocytes, and 6% monocytes, glucose 179 mg/dl, creatinine 0.86mg/dl, blood urea 34mg/dl, and serum lipase 12 IU/l. Liver Function Test revealed AST 51 U/l, ALT 31 U/l, alkaline phosphatase 116 UI/l, albumin 2.8g/dl, and globulins 4.9g/dl. Alphafetoprotein and adenosine deaminase level were within normal limits. Ascitic fluid cytochemistry with a pH of 7.2, cells 368 with 45% lymphocytes, glucose 125mg/dl, and triglycerides 435mg/dl. Ascitic fluid cytology was negative for acid fast bacilli and neoplastic cells. Ascetic fluid culture was negative. Ultrasound imaging revealed contracted liver with coarse echotexture, irregular edges, vena porta with a 13mm diameter, and abundant ascitic fluid. Endoscopy found small esophageal varices in the distal two-thirds, slight portal hypertensive gastropathy changes in the fundus and body. Computerised tomography scanning of abdomen was within normal limits.

The patient was managed with therapeutic paracentesis, diuretics, propranolol (a beta blocker), and antibiotics cefotaxime 1 gram thrice daily. He was discharged after improvement with the therapeutic measures.



### DISCUSSION

Chylous ascites is diagnosed when the ascitic fluid has high fat (triglyceride) content, usually higher than 110mg/dL. Elevated ascites, plasma triglyceride ratio between 2:1 and 8:1 are also indicative of chylous ascites.<sup>[1]</sup> Multiple causes have been described, including Abdominal surgery, Blunt abdominal trauma, Malignant neoplasms - Hepatoma, small bowel lymphoma, small bowel angiosarcoma, and retroperitoneal lymphoma, Spontaneous bacterial peritonitis, Cirrhosis (0.5%), Pelvic irradiation, Peritoneal dialysis, Abdominal tuberculosis, Carcinoid syndrome and Congenital defects of lacteal formation. True chylous ascites (Fluid with high triglyceride content) should be differentiated from chyliform ascites which is fluid with a lecithin-globulin complex due to fatty degeneration of cells and Pseudochylous ascites which has Fluid that is milky in appearance due to the presence of pus.<sup>[2]</sup>

The underlying pathophysiology of chylous ascites in cirrhosis of liver is due to an increased intra-abdominal pressure combined with degenerative changes in the splanchnic lymph vessels and dilated lymphatic channels because of excessive lymph flow thus leading to an intra-abdominal leakage of lymph fluid.<sup>[3]</sup> They present as progressive and painless abdominal distension which occurs over the course of weeks to months.

Lymph node fibrosis and infiltration by malignancy and thus obstructing the flow of chyle, its leaking through fistula and subserosal lymphatics into peritoneal cavity may be another explanation.<sup>[4]</sup>

Paradoxical immune reconstitution inflammatory syndrome may sometimes responsible for development of such type of ascites.<sup>[4]</sup>

Most chylous effusions respond to an initial approach with high protein and low fat diet with medium chain triglycerides by reducing the production and flow of chyle.<sup>[5]</sup> Patients with cirrhotic chylous ascites should be managed with low sodium diet and diuretics such as

spironolactone. Somatostatin and octreotide have been successfully used to treat chylous effusions due to lymphatic leakage. It has been speculated that somatostatin improves chylous ascites by inhibition of lymph fluid excretion through specific receptors found in the normal intestinal wall of lymphatic vessels.<sup>[5]</sup>

To conclude, although chylous ascites is a rare clinical finding, general physician should be aware of the serious underlying causes and therefore always rule out malignancy and mycobacterial infection even in asymptomatic, supposedly healthy patients.

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