
Letter to the Editor (Viewer's Choice)

SUCCESSFUL TREATMENT OF NEONATAL IDIOPATHIC CHYLOUS ASCITES WITH SOMATOSTATIN

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A 60 day old girl was referred for increasing abdominal distension since past 6 weeks. She was a full term baby delivered normally and immediate post natal course was uneventful. There were no dysmorphic features. Ultrasonographic (USG) examination revealed gross ascites without organomegaly. Hemogram, liver transaminases, thyroid function and renal function tests were normal. S. cholesterol was 582mg/dl, S. proteins were 2.2gm/dl with serum albumin of 1.1gm/dl. Abdominal paracentesis was done and about 150ml of milky ascitic fluid was aspirated. Ascitic

fluid examination showed 240 cells/cumm with 100% lymphocytes, protein of 3.2gm/dl and glucose 90mg/dl. Chylous test (direct visualisation of fat globules under microscope after extraction with ether) was positive and diagnosis of chylous ascites was confirmed. Child was on exclusive breast feeding and refused to accept skimmed milk or any formula enriched with medium chain triglyceride (MCT) oil. Parents refused total parenteral nutrition (TPN). She was started on intravenous infusion of IV somatostatin 10mcg/kg per day as infusion of 1.5mcg/kg/hr daily for 10 days. The baby remained on exclusive breast feeding,

throughout the entire treatment course. No side effects of somatostatin were found. Her abdominal girth and distension gradually started decreasing. There was complete resolution of ascites in next 6 weeks. She is on regular follow-up and having normal growth.

Chylous ascites is not commonly seen in the neonatal period. Affected neonates usually present with abdominal distension and respiratory distress (1). The treatment and prognosis of the patient depend on the cause of chylous ascites. Chylous ascites may be the result of developmental defect of the lymphatic system, non specific bacterial, parasitic and tuberculoses peritoneal infection, liver cirrhosis, malignant neoplasm blunt abdominal trauma and surgical injury. (2,3) The aetiology of most cases of chylous ascites remains unknown. In adults the most common cause is abdominal malignancy, while in children congenital lymphatic abnormalities are more common. Weber et al (4) reviewed 51 children of congenital chylous ascites from 1877 to 1972. The male to female ratio was 2:1. Seventy seven percent had ascites at birth. No specific cause was found in thirty cases. Seven cases underwent laparatomies with no abnormalities found. However, abnormalities were found in 21 patients, including aplasia, occlusion and lymphangiectasia of lymphatic duct. Sixty five percent survived for 3 months to 15 years. Previous investigators suggested that congenital chylous ascites should be treated conservatively at first. (5) In a series of 103 Japanese patients, 63.5% were cured by conservative treatment. The average treatment period was 63.5 days. (6) Most of the cases are functional defects of the lymphatic chain such as "leaky lymphatics", and structural abnormalities of the lymphatic system in infants are rare. (1) The goal of conservative treatment is to provide "gut rest" and decrease the intestinal secretions. Conservative management includes enteral feeding with a formula high in medium-chain triglycerides (MCT), low in long-chain triglycerides (LCT) and enhanced in protein content, and repeated abdominal paracentesis. Abdominal paracentesis can rapidly relieve respiratory insufficiency and abdominal discomfort. However, it may induce critical losses of fluid, lymphocytes, protein, coagulation factors and antibodies with increased chance of infection and may result in more ascites. Although these methods are usually successful, enteral feedings, even just clear water, have been shown to increase thoracic duct lymph flow. (7) There has been report of successful use of somatostatin in neonatal chylothorax. (8,9). It has been hypothesised that somatostatin arrests lymphatic flow through reduction in gastric, intestinal, and pancreatic secretions or by a decrease in hepatic venous pressure and splanchnic blood flow. Since the gastrointestinal secretory volume and enzymes are decreased, there is a resultant decrease in the volume and protein/triglyceride content of the fluid in the lymphatic duct. Theoretically TPN is superior

to enteral feeding because the bowel is bypassed. (8) Surgical intervention is recommended if 1 to 2 months of conservative approach failed. The success of the operation depended on identifying the site of leakage of the lymphatic duct. (6) In our case, a marked reduction of chylous ascites was observed after somatostatin infusion alone without use of TPN or dietary restriction.

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