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CASE REPORT

CHYLE IN HERNIAL SAC IN CHYLOUS ASCITES IN 47 YEARS OLD MALE FROM CHENNAI, INDIA

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ABSTRACT

We present case of a 47 year male, who underwent elective surgical repair for inguinal hernia. During surgery, chyle was unexpectedly found in the hernia sac and abdominal cavity. A thorough diagnostic workup for chylous ascites was performed to rule out pre-existent underlying pathologies, and the patient was temporarily placed on a medium-chain triglyceride diet. No symptoms occurred afterwards. Based on the clinical course and results of additional investigations, this rare phenomenon has most likely occurred due to obstruction and potential rupture of lymphatic structures due to mechanical effects following intermittent incarceration and subsequent repetitive manual reduction of the symptomatic hernia including bowel loops as content of the hernia sac. A search was made and chylous ascites as hernial content was not reported in adults. This is a rare instance.

KEY WORDS: Chyle; Chylous Ascites; Inguinal Hernia; Abdominal Cavity; Appendix; Omentum; Laparotomy; Neoplasms; Triglycerides; Pseudomonas.

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CASE REPORT

47-year-old male presented with on & off swelling for one year and intermittent dull aching pain for one week in right lower abdomen. The pain was continuous for last three days. He had less frequent hard stools for 7 days. Examination showed 5x4 cm swelling in right inguinal region extending into root of scrotum. Cough impulse was present. The swelling was reducible & not able to get above the swelling. Deep ring occlusion test, Zieman test and finger invagination test were all positive and a diagnosis of right inguinal indirect uncomplicated hernia with omentum as its contents was made. The rest of the examination was unremarkable.

Biochemical & hematological investigations were within normal limits. Abdominal ultrasound showed a defect of size 2x2 cm in the right inguinal region with omentum as its contents. Patient was planned for surgery.

The patient was operated as an elective case done under spinal anesthesia. Incision was placed over the skin, camper, scarpa fascias, external oblique aponeurosis laid open from superficial ring to level of deep ring. Ilioinguinal and iliohypogastric nerves were preserved. Cremasteric muscle along with cord structures seen, cremasteric muscle and fascia opened, cord structures identified and separated from sac. Sac separated up to deep ring. On opening of the sac to reduce contents; 10-15 ml of milky fluid was present in the sac, which was aspirated. (Figure 1)

Then a lower midline laparotomy incision was performed to rule out the presence of an inflamed appendix and other causes of the white fluid. The appendix was normal with no signs of inflammation. Bowel walk through was done and the white fluid was seen to come from the retrocaecal region and right paracolic gutter, but no definite swelling/ abscess was present; following which a 28 size ICD was placed in the retrocaecal region and the laparotomy wound was closed in layers. After this, the hernial sac was transfixed and ligation was done at deep ring. Herniotomy was done. Modified Bassini's herniorraphy was done. Assuring complete hemostasis, cord was kept back & was closed in layers.

The drain fluid contained milky fluid. Its biochemical analysis showed chylous fluid with triglyceride 324 mmol/L, protein 4 g/dL, ph 8.0 and specific gravity 1.010. Its culture showed growth of Klebseilla and pseudomonas and the patient started on parenteral antibiotics. Contrast enhanced CT abdomen showed no cause of chyle leak. Patient was started on medium chain triglyceride diet and injection octreotide 100 mcg for five days, following which the patient

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improved symptomatically and was discharged.

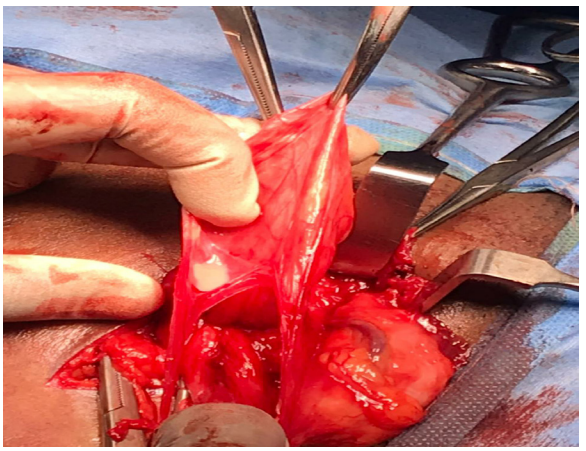

Figure 1: Chyle containing hernial sac in chylous ascitis in 47 years old male from Chennai, India

DISCUSSION

Chylous ascites in adults is a rare condition that is characterized by the accumulation of lymph in the abdominal cavity, which presents as milky-appearing fluid containing high levels of triglycerides.[1] Chylous ascites occurs after disruption of the lymphatic system, usually due to injury or obstruction of the lymphatic vessels (often caused by surgery or trauma); leading chyle effusion into the abdomen.[3] Non-traumatic etiologic factors include congenital anomalies, liver cirrhosis, infectious diseases, cardiac failure, neoplasms (most common cause) and metabolic conditions.[1,2] In patients undergoing hernia repair, chylous ascites has been described to be caused by hernia incarceration and concomitant attempted manual reduction. In patients with a history of reducible hernia, incarceration causes chylous ascites, it has been suggested that a complete diagnostic workup is not warranted, as the lymph vessels are suspected to heal after reduction of the bowel .[3]

In this patient, no underlying pathologies could be identified for the effusion of chyle from the hernia sac. Therefore we believe it was related to mechanical stress on the inguinal hernia content caused by recurring episodes of symptomatic and intermittently incarcerated hernia including bowel loops and accompanying lymphatic structures as content of the hernia sac.

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CONFLICT OF INTEREST
Authors declare no conflict of interest.
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None declared.

AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design:	NG
Acquisition, Analysis or Interpretation of Data:	NG, RT, MC
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All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.