Management of incarcerated inguinal hernia in a patient with yellow nail syndrome

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ABSTRACT

While abdominal wall hernias are often seen in cirrhotic patients, they have not been previously reported following chylous ascites secondary to yellow nail syndrome. In general, repairing abdominal wall hernias in patients with ascites are associated with significant morbidity, recurrence rate and mortality, and are therefore often managed expectantly. Hernial incarceration or strangulation in these patients is a life-threatening complication, and requires urgent surgical intervention. To highlight this difficult issue and its emergency management and repair, we present this report of a 46-year-old man, who was known to have yellow nail syndrome and who was hospitalised for incarcerated inguinal hernia, massive chylous ascites, severe lower limbs oedema, hypoproteinaemia, hypoalbuminaemia and hypocalcaemia.

Keywords: chylous ascites, emergency hernia operation, incarcerated inguinal hernia, inguinal hernia, yellow nail syndrome

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INTRODUCTION

The yellow nail syndrome is a rare clinical entity consisting of dystrophic yellow nails, lymphoedema and pleural effusion, with chylous ascites occurring later in the process of the syndrome.[1-3] Although the pathogenesis is not exactly known, the lymphatic impairment associated with this syndrome appears to be predominantly functional in nature, rather than due to structural changes.[4] Chronic ascites increases the intra-abdominal pressure and leads to hernia formation, while frequent aspiration of chyle causes anaemia, hypoalbuminaemia, hypoproteinaemia, immunocompromise and malnutrition.[5,6] Many authors believe that incarceration of groin hernias is a remote complication in patients with chronic ascites due to the widening effect caused by fluid pressure on the base of the hernia.[7] We describe in this report, for the first time to our knowledge, an incarcerated inguinal hernia in a patient with yellow nail syndrome, and which was managed and repaired successfully on an emergency basis.

Fig. 1 Photograph shows (a) the incarcerated right inguinal hernia, (b) distended abdomen due to ascites, and (c) oedema of the lower limbs.

CASE REPORT

A 46-year-old man, known to have yellow nail syndrome for the last 20 years, was admitted to our hospital complaining of a big inguino-scrotal swelling that was progressively increasing in size over the last six months. 12 hours prior to admission, it became tense and painful. The patient's history dated back to 1984, when after recurrent

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Fig. 2 Photograph shows dystrophic nails seen in the yellow nail syndrome.

attacks of pneumonia and pleural effusion in addition to the presence of lower limb oedema and deformed yellow nails, he was diagnosed to have yellow nail syndrome. Ten years later, he underwent right-sided pleurodesis. Four years prior to admission, he was diagnosed to have chylous ascites and was treated with diuretics along with human albumin infusions and paracethesis when it was causing significant discomfort. Six months prior to admission, he was diagnosed to have a right inguinal hernia, which was treated expectantly. In addition to the incarcerated right inguinal hernia, physical examination showed tense ascites, severe lower limbs oedema (Fig. 1) and dystrophic nails (Fig. 2). Laboratory investigations were within normal limits except for haemoglobin (10.1 g/dL), total proteins (37.2 g/L), albumin (19.9 g/L) and calcium (1.87 umol/L) levels. Chest radiograph showed obliteration of both costophrenic angles.

Intravenous diuretics, calcium gluconate and human albumin infusions started and continued for three days postoperatively. Paracenthesis of a total of three litres of chyle was done over four hours, and the patient was operated upon six hours after admission. Through a right inguinal incision, the hernial sac was isolated and opened. Viable oedematous loops of small intestine were found and reduced into the abdomen. Lichtenstein tension-free prolene mesh repair was done. Cephalosporin and metronidazole antibiotics were started before and continued for three days after surgery. His hospital stay was uneventful and he was discharged on the fifth postoperative day on diuretics and a medium-chain triglyceride diet. To date, the patient has been followed-up for 30 months, without showing signs of recurrence in spite of the poor control of his ascites.

DISCUSSION

In the presence of complicating serious medical conditions such as ascites, the indications for surgical treatment of groin hernias may become controversial. In this difficult situation, the surgeon must weigh the risk of perioperative complications, recurrence, and ascitic leak relative to the likelihood of complications from an untreated hernia.[7] Repairing asymptomatic hernias in patients with ascites depend mainly on the severity of the underlying disease and an expectant approach should be recommended, particularly in patients with poor liver function.[7-9] Hurst et al, in their review of patients with both ascites and inguinal or femoral hernias, found no serious complications in patients treated expectantly. However, in appropriately-selected patients, elective repair can be performed safely with an acceptable rate of recurrence.[7]

Incarceration and strangulation of inguinal hernias are not common in cases of chronic ascites, but if they occur, emergency surgery increases the mortality and morbidity.[10] In this case report, a patient with yellow nail syndrome presented with incarceration and was treated expectantly for his right inguinal hernia and was successfully managed and repaired on an emergency basis without recurrence for 30 months. As ascites is a major risk factor for hernial repair, the successful surgical treatment depends on its minimisation or elimination.[5,8] In emergency situations, aspiration of the abdomen becomes necessary in controlling ascites as medical control takes time. However, this should be done slowly and under supervision as rapid aspiration may precipitate strangulation.[8] In our case, paracenthesis was done over four hours while monitoring for signs and symptoms of strangulation. To correct for the hypoalbuminaemia and maintain a reasonable control of ascites in the perioperative period, human albumin infusions and intravenous diuretics were started preoperatively and continued for three days after surgery.

In addition to the control of ascites and correction of nutritional deficiencies, we think that the type of hernial repair is a major factor in a successful surgery. The abdominal fascia surrounding the hernial defect tends to be weak in patients with malnutrition. This fact, coupled with the likelihood of recurrent ascites, makes tension-free repair with a prosthetic patch necessary.[11] Amid encourages the use of the Lichtenstein open tension-free mesh technique in elective repairs to circumvent the degenerative nature of inguinal hernias and adverse effects of suture line tension.[12] Wysocki et al found that it could be successfully used also in emergency repairs of incarcerated inguinal hernias.[13] In agreement with these reports, we used this type of repair in our patient to give more strength to the weak abdominal wall and to avoid excessive tension and suturing.

Concern about infective complications in the implanted material is the chief reason for avoiding their use in emergency operations of incarcerated hernias.[13] This is entirely understandable because bacterial translocation is one of the most dangerous complications of intestinal obstruction. The use of prophylactic antibiotics in elective open tension-free mesh hernial repairs has not been

supported by recent randomised trials.[14,15] However, their use becomes necessary in patients undergoing emergency hernial repairs and should be continued over a period of 2–4 days postoperatively.[13] In our case, not only did the patient present with incarceration, but he was also considered to be immunocompromised, due to loss of immunoglobulins and lymphocytes through the chyle.[5,6] Intravenous prophylactic antibiotics was started before surgery and continued for three days postoperatively.

Medical control of ascites in the postoperative period consisted of oral diuretics and a medium chain triglyceride diet with human albumin infusions, and aspiration when it was causing significant discomfort. Despite the recurrence of ascites two weeks after repair, the patient has been followed-up for 30 months to date without showing signs of hernial recurrence, which supports the finding of Hurst et al that recurrence of ascites does not appear to influence the outcome of the surgical repairs of hernia.[7] In conclusion, we think that in cases of primary chylous ascites, such as in the yellow nail syndrome, where life expectancy is long, hernial repair should be done electively before it develops complications. Moreover, control of ascites in the perioperative period and the use of open, tension-free mesh technique for repair play major roles in prevention of recurrence.

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