Incarcerated Umbilical Hernia after Large Volume Paracentesis for Refractory Ascites

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A 42-year-old Caucasian male with cirrhosis due to alcohol abuse and HCV infection was having repeated 4-5 L paracenteses, increasing in frequency to twice monthly, over 31 months. Following the last paracentesis, he developed nausea, umbilical pain and a tender, warm non-reducible umbilical mass. A CT scan confirmed a large umbilical hernia with incarcerated bowel and ascites (Figs. 1 a,b).

He underwent emergency surgery. The incarcerated loop of small bowel was ischaemic but viable, so no resection was necessary, and the hernia spontaneously reduced. A two layered prosthetic mesh of polypropylene and PTFE was placed to reinforce the abdominal wall. After two days the patient was discharged in a good clinical condition.

The prevalence of umbilical hernia in patients with cirrhosis and ascites is as high as 20%, with recurrence rates after repair as high as 60% [1]. Common complications include leakage, ulceration, rupture and incarceration. There are only three case reports associating incarceration with paracentesis [1-3]. The removal of ascitic fluid following paracentesis causes decreased tension on the umbilical hernia ring, which can lead to incarceration.

Management of umbilical hernias in cirrhotic patients with ascites remains difficult as they often have advanced liver disease and are at increased risk of complications following any surgical intervention. Elective surgical repair prevents complications, whereas mortality after emergency surgery is up to 30%. Mesh repair has lower recurrence rates than standard repair [4]. Optimal control of ascites before repair is essential and transjugular intrahepatic portosystemic stent shunt (TIPS) may be needed. TIPS can reduce the rate of re-accumulation of ascites, and also reduces portal hypertension. If liver transplantation is likely in the near future, repair can take place at the same time.

Patients with cirrhosis and umbilical hernias should be referred for a surgical opinion to be considered for elective repair. Repair should be performed after optimal management of ascites, which includes fluid and salt restriction, diuretics and possibly a TIPS procedure before surgery, if the ascites is difficult to control with diuretic therapy [5].

References