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Umbilical hernia in a patient with ascites. Clinical case

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ABSTRACT

INTRODUCTION. *Since 1808, umbilical hernias were registered based on existing data, in such a way that 4716 scientific articles were registered in the last two centuries. About 6 to 14% of all abdominal wall hernias in adults are umbilical hernias with a prevalence of 2%.*

CLINICAL CASE. *A 47-year-old male came to the emergency room presenting with a giant umbilical hernia, liver cirrhosis and increased abdominal girth, fluid retention (ascites) to perform paracentesis of approximately 5 Liters, presenting confusion, asterixis, dyslalia, aphasia, upon admission. no coordination of walking. On physical examination, she was found to be hemodynamically unstable with the presence of ascitic fluid leakage through an ulcer caused by tension in the umbilical region; feverish peaks, for which reason a liquid sample was taken by puncture in the left iliac fossa, yellow in color and cloudy in appearance with glucose 106 mg/dL, LDH 239 mg/ml, presence of Hb (+++), and leukocytosis. He was evaluated for general surgery. Where a non-reducible incarcerated umbilical hernia was observed, it was decided to treat the complicated hernia, partial omentectomy plus ventral plasty with the Rives-Stoppa technique plus omphaloplasty with Drenovac-type closed drainage was performed without complications.*

DISCUSSION. *Cirrhotic patients who do not respond to medical treatments for ascites will require treatment such as serial therapeutic paracentesis. Large volume paracentesis (LVP), defined as the removal of more than 5 L of ascitic fluid, is an effective therapy for patients with tense ascites.*

Keywords: Umbilical hernia; Cirrhosis; Incarceration; Rives-Stoppa technique.

INTRODUCTION

Since 1808, umbilical hernias were registered based on existing data, in such a way that 4716 scientific articles were registered in the last two centuries. About 6 to 14% of all abdominal wall hernias in adults are umbilical hernias with a prevalence of 2%. 90% of umbilical hernias in adults are acquired due to increased intra-abdominal pressure and have predisposing factors such as obesity, a history of multiple

pregnancies with prolonged labor, ascites, and intra-abdominal neoplasms. It is believed that the adipose tissue probably separates layers of muscle, causing the abdominal muscles to become distended, allowing the formation of umbilical hernias (1).

Mortality rates for elective and emergency patients reported by one series were 7 and 54%, respectively. The reported mortality rate higher than that of the data published in the international literature can be explained only by the high rate of MELD score ≥ 20 in two groups (20 and 41%), respectively, and also by the high rate of CPT class C and ASA score ≥3 which are 16 and 62% in the elective surgery group and 90 to 100% in the emergency surgery group. Therefore, control of ascites is essential to reduce complications and recurrence (2).

CLINICAL CASE.

A 47-year-old male attended the emergency room for a giant umbilical hernia, liver cirrhosis, and increased abdominal circumference, with abdominal fluid retention (ascites) to perform therapeutic paracentesis with the extraction of approximately 5 liters, he also presented confusion, asterixis, dyslalia, aphasia, uncoordinated gait. As history, he presented alcoholic liver cirrhosis diagnosed 2 years ago under treatment with furosemide, spironolactone, lactulose, propranolol, and umbilical hernia of approximately 1-year evolution.

He was hospitalized seven times to perform evacuating paracentesis. On admission, he was found to be hemodynamically unstable with leakage of ascitic fluid through an ulcer caused by tension in the umbilical region accompanied by feverish spikes, for which reason a fluid sample was taken by puncture in the left iliac fossa, with the result of yellow fluid from a cloudy appearance with glucose 106 mg/dl, LDH 239 mg/dl, presence of Hb (+++), leukocytosis and no bacteria were observed. General surgery was evaluated by who found the patient hemodynamically stable with adequate renal function and septic ascites.

On physical examination, a non-reducible incarcerated umbilical hernia was observed. It was decided to carry out a surgical protocol to resolve the hernia; He was taken to the operating room and a partial omentectomy plus ventral plasty was performed with the Rives-Stoppa technique plus omphaloplasty with Drenovac-type closed drainage.

He was admitted to the surgery department where he remained under observation for three days and it was decided that he should be discharged with antibiotics, analgesics, and withdrawal of the Drenovac, without any complications. (Figs. 1-3).

Figure 1. Macroscopic aspect of the umbilical hernia.

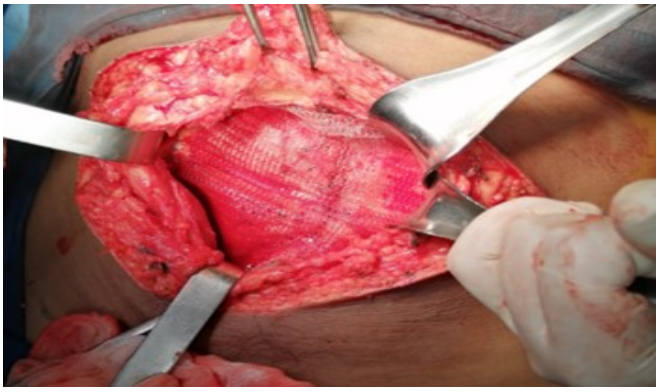

Figure 2. Mesh placement.

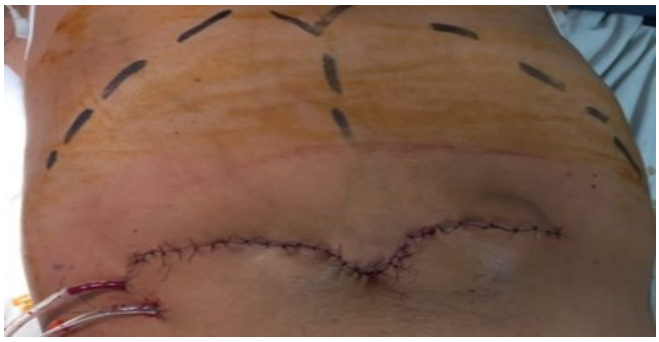

Figure 3. Final aspect of the surgical intervention.

DISCUSSION

The prevalence of umbilical hernia in the adult population is 2% and constitutes about 5% of all hernias with a minimal female predominance. Adult-acquired umbilical hernias occur more frequently in cirrhotic patients. Cirrhotic patients who do not respond to initial medical treatments for ascites (salt and fluid restriction, diuretics) or who respond initially but later lose response will require more invasive treatment such as serial therapeutic paracentesis, creation of TIPS, or bypass surgery. Large volume paracentesis (LVP), defined as the removal of more than five liters of ascitic fluid, is an effective therapy for patients with tense ascites (3).

Khatib S et al (4), present a case where they state that the development of an incarcerated or strangulated umbilical hernia secondary to a paracentesis is not frequent; however, this complication has high rates of morbidity and mortality in such a way that those patients who develop large volumes of ascites and require frequent paracentesis should be surgically intervened to prevent secondary complications such as incarceration or hernia strangulation that endanger the lives of these patients.

Keat Tan H et al (5), in their series of three patients with incarcerated umbilical hernias, after resolution of large volume ascites resolved by placing Tips, developed strangulation and small bowel infarction. Thus, in patients treated with diuretics and salt restriction, control or resolution of ascites generally occurs at a much slower rate, and therefore umbilical hernia tends to occur weeks to months after initiation. therapy, as observed in his third patient.

Tsushimi T et al (6), present the case of a 42-year-old obese woman who was admitted to developing sudden abdominal pain and was diagnosed with a non-reducible incarcerated umbilical hernia. Emergency laparoscopy is performed to reduce the hernia without intestinal damage. Mesh was placed to cover the hernial defect by at least 5 cm in all directions. The patient recovered without incident.

Honmyo N et al (7), reported a case of hemoperitoneum secondary to umbilical vein rupture associated with liver cirrhosis. The cirrhotic liver in a decompensated stage can develop unexpected collateral circulation, which can cause intraperitoneal hemorrhage as in this case, which required emergency surgery.

Albeladi AM et al (8), report a young patient treated urgently with surgical repair with mesh, clinically stable without signs of infection with the Sublay technique because it has a lower rate of infection and recurrence. This technique can be used in elective repair and also in emergencies. The patient is treated with intraperitoneal drainage, with broad-spectrum antibiotics, albumin, and a regular bandage, they showed less abdominal distension and were discharged after 14 days of hospital stay in good condition.

Pinheiro RS et al (9), consider that surgical treatment of abdominal hernias in cirrhotic patients is often delayed due to the increased morbidity and

mortality associated with the underlying liver disease. Some patients are followed conservatively and are only operated on when "wait and see" complications occur, however, they consider that elective hernia repair offers acceptable morbidity and ensures greater survival because the emergency approach endangers the patient's cirrhotics and should be avoided.

Mikolajczyk AE et al (10), report a case of a 45-year-old man with alcoholic cirrhosis who presented to the clinic with progressive abdominal distension with severe ascites. A reducible hernial sac with a bluish hue was observed in the navel. Auscultation of the sac revealed a continuous hum. CT scan demonstrated a large recanalized umbilical cord protruding through the umbilical defect; no intestine or omentum within the hernial sac. Doppler confirmed nonphasic hepatofugal blood flow at 72 cm/s in the sac. Given the nature of the hernia, the repair was not attempted; and ascites were managed with diuresis and serial paracentesis.

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