

THE CLINICAL PICTURE

PIETER MARTENS, MD

Department of Internal Medicine, University Hospital Gasthuisberg, Catholic University Leuven, Vlaams Brabant, Belgium

WIM LALEMAN, MD, PhD

Department of Liver and Biliopancreatic Disorders, University Hospital Gasthuisberg, Catholic University Leuven, Vlaams Brabant, Belgium

Umbilical hernia in a patient with cirrhosis

A 62-YEAR-OLD MAN was admitted to the intensive care unit with esophageal variceal bleeding. He had a long history of alcohol abuse with secondary cirrhosis, with a Child-Pugh score of 11 on a scale of 15 (class C—the most severe) at presentation. He also had a history of uncomplicated umbilical hernia, 6 cm in diameter without overlying trophic skin alterations.

Treatment with somatostatin, endoscopic band ligation, and prophylactic antibiotics was initiated for the variceal bleeding. The next day, he was transferred to the hepatology floor. His condition stabilized during the next week, but then he abruptly became diaphoretic and less talkative. Physical examination revealed a painful and irreducible umbilical hernia (**Figure 1**). He was rushed for umbilical hernia repair with resection of a necrotic segment of small bowel. His recovery after surgery was uneventful, and he was eventually discharged.

■ UMBILICAL HERNIA AND CIRRHOSIS

Umbilical hernia is common in cirrhotic patients suffering from ascites, with a prevalence up to 20%, which is 10 times higher than in the general population.¹ Ascites is the major predisposing factor since it causes muscle wasting and increases intra-abdominal pressure.

A unique feature of cirrhosis is low physiologic reserve, which increases the risk of death from complications of umbilical hernia and makes the patient more vulnerable to perioperative complications during repair. Because of the high operative risk, umbilical hernia repair has traditionally been reserved for the most complicated cases, such as strangulation of the bowel or rupture of the skin with leakage of ascitic fluid.^{2,3} Many patients are thus managed conservatively, with watchful waiting.

However, the natural course of umbilical hernia tends toward complications (eg, bowel incarceration, rupture of the overlying skin), which necessitate urgent repair.⁴ The risk of death with hernia repair in this urgent setting is seven times higher than for elective hernia repair in cirrhotic patients.⁵ More re-

doi:10.3949/ccjm.82a.14012



FIGURE 1. Incarcerated umbilical hernia in a 62-year-old patient with Child-Pugh class C cirrhosis.

cent data indicate that elective repair in patients with well-compensated cirrhosis carries complication and mortality rates similar to those in noncirrhotic patients.⁵⁻⁸ Therefore, patients who should undergo umbilical hernia repair are not only those with complicated umbilical hernia (strangulation or ascites leak), but also those with well-compensated cirrhosis at risk of complications.

Factors that pose a particularly high risk of complications of repair are large hernia (> 5 cm), hernia associated with pain, intermittent incarceration, and trophic alterations of the overlying skin.¹ In these pa-

tients, elective repair should be considered if hepatic function is preserved, if ascites is well managed (sodium restriction, diuretics, and sometimes even preoperative transjugular intrahepatic portosystemic shunt placement), and if the patient is not expected to undergo

liver transplantation in the near future. If liver transplantation is anticipated in the short term, umbilical hernia can be managed concomitantly. Management of ascites after umbilical hernia repair is essential for prevention of recurrence. ■

REFERENCES

1. Dokmak S, Aoussilhou B, Belghiti J. Umbilical hernias and cirrhosis. *J Visc Surg* 2012; 149(suppl 5):e32–e39.
2. Baron HC. Umbilical hernia secondary to cirrhosis of the liver. Complications of surgical correction. *N Engl J Med* 1960; 263:824–828.
3. Hansen JB, Thulstrup AM, Vilstrup H, Sørensen HT. Danish nationwide cohort study of postoperative death in patients with liver cirrhosis undergoing hernia repair. *Br J Surg* 2002; 89:805–806.
4. Marsman HA, Heisterkamp J, Halm JA, Tilanus HW, Metselaar HJ, Kazemier G. Management in patients with liver cirrhosis and an umbilical hernia. *Surgery* 2007; 142:372–375.
5. Carbonell AM, Wolfe LG, DeMaria EJ. Poor outcomes in cirrhosis-associated hernia repair: a nationwide cohort study of 32,033 patients. *Hernia* 2005; 9:353–357.
6. Eker HH, van Ramshorst GH, de Goede B, et al. A prospective study on elective umbilical hernia repair in patients with liver cirrhosis and ascites. *Surgery* 2011; 150:542–546.
7. Gray SH, Vick CC, Graham LA, Finan KR, Neumayer LA, Hawn MT. Umbilical herniorrhaphy in cirrhosis: improved outcomes with elective repair. *J Gastrointest Surg* 2008; 12:675–681.
8. McKay A, Dixon E, Bathe O, Sutherland F. Umbilical hernia repair in the presence of cirrhosis and ascites: results of a survey and review of the literature. *Hernia* 2009; 13:461–468.

ADDRESS: Pieter Jan Paul Martens, MD, Department of Internal Medicine, University Hospital Gasthuisberg, Catholic University Leuven, Herestraat 49, Leuven, Vlaams Brabant 3000, Belgium; e-mail: pieter.1.martens@uzleuven.be



4th Annual Primary Care Evidence-Based Medicine Update

“Evidence that Matters”

October 30 – 31, 2015

Cleveland Clinic Administrative Campus
Building #4, Auditorium
Beachwood, OH

PRESENTING THE 4TH ANNUAL PRIMARY CARE EVIDENCE-BASED MEDICINE UPDATE

Family practitioners, more than any other health care providers, are required to be knowledgeable of the most recent practices in a wide array of medical specialties.

This educational activity is designed to address primary care clinicians' knowledge and educational needs through short presentations that review and analyze recent findings from pertinent clinical research, with a specific focus on research studies that have immediate implications for practice. Most of the studies reviewed will be well-designed randomized clinical trials and meta-analyses.

Register Today! ccfcme.org/2015PrimaryCare

This activity has been approved for *AMA PRA Category 1 Credit™*.

