MANAGEMENT OF LARGE ERODING UMBILICAL HERNIA:
A CASE REPORT

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Background

- Patients with large, eroding umbilical hernias are at increased risk for complications such as surgical site infections, dehiscence, and recurrence.
- **Pathophysiology**: Conditions that elevate intra-abdominal pressure contribute to the development and progression of umbilical hernias. The increased pressure pushes the abdominal contents through a weakened umbilical ring leading to herniation. Friction at the hernia site can cause skin breakdown and ulceration which can progress to full-thickness skin loss and lead to rupture and evisceration.
- **Epidemiology**: Increased risk in obese population, age 60-70 years, males, diabetics, smoking, previous abdominal surgeries, pregnant women. Present in 23-50% of the U.S. adult population. About 65% will require surgery.
- **Diagnosis**: Clinical evaluation, CT Imaging.
- **Management**: Surgical repair of the hernia +/- use of mesh.
- This case highlights a large eroding umbilical hernia and outlines key surgical principles for successful repair.

Case Description

A 78-year-old female presented with a chronic umbilical hernia that had progressively enlarged over seven years. In the months preceding her clinic visit, she experienced worsening erythema and skin necrosis within the umbilical folds, unresponsive to antibiotics. On physical examination, a large, non-reducible umbilical ventral hernia with skin necrosis, ulceration, cellulitis, and erythema in the umbilical folds was observed. Her lab results were normal. CT imaging revealed a large umbilical hernia containing fat and non-obstructed transverse colon, with a trace of fluid at the margins. The hernia sac measured 6.5 x 10.2 x 11.4 cm.



Figure 1. CT scan demonstrating large umbilical hernia containing fat and colon.

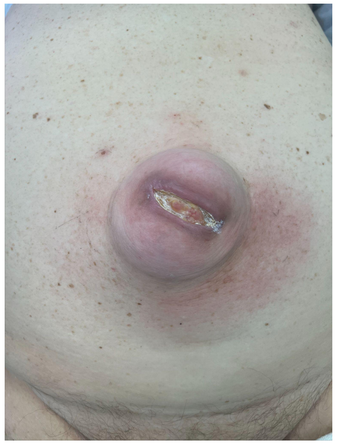


Figure 2.
Large umbilical hernia with skin erosion



Figure 3.
Surgical planning with wide elliptical incision



Figure 4.
Dissected hernia sac involving large omental fat and partially reduced nonobstructed colon

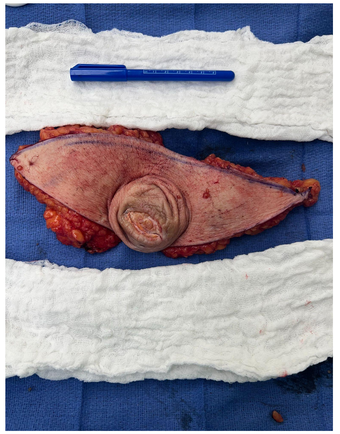


Figure 5.
Resected umbilical hernia with overlying skin

Case Description (continued)

Due to persistent pain, the patient underwent surgical repair, including excision of the umbilicus, partial omentectomy, panniculectomy, flap creation, and primary abdominal wall reconstruction. No mesh was used due to the cellulitic and eroded nature of the site. A large elliptical incision was made to achieve tension-free closure. The resected specimen included a 21.5 x 9.0 x 3.5 cm portion of fatty tissue (panniculus) partially covered by 21.5 x 7.0 cm of pale skin. A protruding herniating mass measuring 6.0 x 5.0 x 3.5 cm, with a central ulcerating lesion, was identified. Pathology confirmed the findings, and the patient's postoperative course was uneventful. She remains asymptomatic at her six-month follow-up.

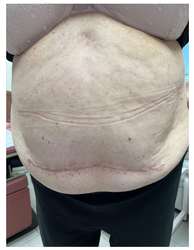


Figure 6. Postoperative visit 3 months later.

Discussion

This case presents a rare instance of a large, eroding umbilical hernia.

1. A large elliptical incision was key to achieving tension-free repair.
2. We recommend against the use of mesh in cases involving cellulitic or eroded tissue, as seen in this patient.

References

1. Arora E, Gandhi S, Bhandarwar A, Quraishi AHM, Wagh A, Tandur A, Wakle D. Umbilical Hernia with Evisceration. Two Cases and a Review of the Literature. J Emerg Med. 2018 Aug;55(2):e27-e31.
2. Lau B, Kim H, Haigh PI, Tejirian T. Obesity increases the odds of acquiring and incarcerating noninguinal abdominal wall hernias. Am Surg. 2012 Oct;78(10):1118-21.
3. Coste AH, Bamarni S, Leslie SW. Umbilical Hernia. [Updated 2024 Feb 27]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan.

Disclosures

The authors declare that they have no relevant or material financial interests that relate to the research described in this poster

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