

Unusual Case of Paraumbilical Hernia with Appendix as Content

Dr. Shobhit Maheshwari¹, Dr. Subhash Chawla², Dr. Shivam Sharma³, Dr. Himanshu Tanwar⁴,
Dr. Rijuta De⁵

¹Post Graduate Student, Department of Minimal Invasive Surgery, M. M. I. M. S. R, Mullana, Ambala (Haryana)

²Professor and Head MIS, Department of Minimal Invasive Surgery, M. M. I. M. S. R, Mullana, Ambala (Haryana)

³Senior Resident, Department of Minimal Invasive Surgery, M. M. I. M. S. R, Mullana, Ambala (Haryana)

⁴Post Graduate Student, Department of Minimal Invasive Surgery, M. M. I. M. S. R, Mullana, Ambala (Haryana)

⁵Post Graduate Student, Department of Minimal Invasive Surgery, M. M. I. M. S. R, Mullana, Ambala (Haryana)

Abstract: Umbilical hernia is a common presentation to the surgeon, often on a non emergent basis for a bulge at or lateral to the umbilicus but occasionally under emergency circumstances for pain or bowel obstruction when the hernia contents become incarcerated or strangulated. Risk factors for umbilical hernia include female gender, obesity, and as cites. A defect in the abdominal wall fascia at the umbilicus allows the preperitoneal adipose tissue, omentum, or small or large bowel to protrude through the defect. We present a case of a strangulated umbilical hernia containing appendix as hernial content in a morbidly obese female who underwent Exploratory Laparotomy and hernial repair was done.

Keywords: umbilical hernia, obstruction, appendix, exploratory laparotomy, primary closure

1. Introduction

Appendix epiploica can occasionally cause acute abdominal pain. The usual presentations are torsion or primary epiploic appendicitis. Strangulation inside a paraumbilical hernia with acute abdominal pain is seldom reported in the literature.² We report a case of preoperative diagnosis and treatment of strangulated appendix epiploica in paraumbilical hernia that presented as acute abdominal pain.

2. Case Report

A case of a 57-year-old female presented in emergency with history of vomiting for 4 days which was bilious with severe lower abdominal pain and irreducibility of a paraumbilical swelling. The patient presented with sharp, non-radiating paraumbilical pain. She had noticed a swelling near her umbilicus 3 days back. The patient had no past similar history, no prior injury, or history of abdominal surgery. She had past medical history of hypertension since 3 years. Physical examination revealed an area of firmness near the umbilicus that was tender but with overlying skin changes. She had complaints of irregular bowel habits and features of intestinal obstruction since 4 days. Due to the diagnostic uncertainty and inability to obtain imaging, she was transferred to our tertiary care centre in emergency.

On physical examination, we found tachycardia, with hypotension on per abdomen we found a tender, erythematous and irreducible paraumbilical swelling. Laboratory values were significant only for leukocytosis with an elevated white blood cell count of 14,000 with 84% neutrophils. He had a temperature of 101 °F.



Figure 1: On Presentation Paraumbilical Hernial Swelling

An abdominal ultrasound (USG Whole Abdomen) was performed and read by the radiologist as a Strangulated umbilical hernia and irreducible neck of hernial sac about 20mm.

With a diagnosis of strangulated paraumbilical hernia, the abdomen was explored through a midline incision involving the umbilicus of around 8cm. Opening the sac revealed inflammatory fluid, necrosed omental fat, and a gangrenous appendix. A Defect of 4cm was seen at the umbilical region having strangulated ileum with resultant band due to strangulation at the neck of the sac almost 20 cm proximal to the ileo-caecal junction with incarcerated appendix (gangrenous) between ileum and omentum. Appendicectomy

was performed with anatomical double-breasted repair of the hernial defect.



Figure 2: USG spots showing Strangulated Umbilical Hernia



Figure 3: Gangrenous Appendix with Necrosed Omental Fat

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Figure 4: Resected Specimen Showing Gangrenous Appendix with Necrosed Omental Fat

3. Discussion

Hernias containing the appendix have a number of interesting eponyms. An Amyand hernia is an incarcerated inguinal hernia containing the appendix while a de Garengeot hernia is a femoral hernia with incarcerated appendix in the hernia sac. These eponyms are named after their discoverers Jacques Croissant de Garengeot (1731) and Claudius Amyand (1735).³

An incarcerated appendix in the hernia sac creates challenging diagnostic and therapeutic challenges. Appendicitis in ventral hernias occurs in just 0.13 % of cases of acute appendicitis.⁴

Appendicitis occurring in umbilical and paraumbilical hernias is exceedingly rare. Physical examination skills can make the diagnosis of incarcerated umbilical hernia based on a bulge at the area of concern, tenderness, and, at times, overlying skin changes. Urgent operative repair should be pursued when a concern for incarceration or strangulation exists. CT scans and USG Whole Abdomen aid in the diagnosis and key the practitioner into the possibility of abdominal viscera in the hernia sac. USG whole abdomen imaging diagnosed case of strangulated umbilical hernia preoperatively and this was a case of a gangrenous appendicitis between a band between ileum and omentum at

the umbilicus. The likely pathologic process is incarceration leading to extrinsic compression that causes ischemia of the appendix and strangulation with acute onset of abdominal pain.

However, with necrosed appendicitis discovered at time of repair, the synthetic mesh would be contraindicated and we must accept a higher risk of recurrent hernia by performing a primary tissue repair only.

4. Conclusion

The complete surgical excision of gangrenous appendix is always recommended to eliminate the risk of infection and recurrence. An exploratory laparotomy done with appendicectomy is the treatment of choice.

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