

Case Report

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Strangulated Lumbar Hernia a Rare Cause of Gangrenous Bowel Obstruction; A Case Report from Felege Hiwot Referral Hospital: Ethiopia

Nebiyu Shitaye*, Gebeyaw Mengist

Department of Surgery, Bahir Dar University College of Medicine and Health Science, Felege Hiwot referral hospital, Bahir Dar Ethio-pia

Corresponding author: Nebiyu Shitaye, Department of Surgery, Bahir Dar University College of Medicine and Health Science, Felege Hiwot referral hospital, Bahir Dar Ethiopia. Email: handworklove@gmail.com**Citation:** Shitaye N and Mengist G (2018) Strangulated Lumbar Hernia a Rare Cause of Gangrenous Bowel Obstruction; A Case Report from Felege Hiwot Referral Hospital: Ethiopia. J Surg: JSUR-1173. DOI: 10.29011/2575-9760.001173**Received Date:** 11 September, 2018; **Accepted Date:** 19 October, 2018; **Published Date:** 26 October, 2018

Abstract

Background: The finding of combined gangrenous bowel obstruction in spontaneous lumbar hernia constitutes an extremely rare clinical entity.

Case Presentation: A 65-year-old female Ethiopian patient from Bahir Dar presenting with combined gangrenous bowel obstruction in spontaneous lumbar hernia. The swelling was there for the last 16 years but didn't seek medical attention. Diagnosis was not confirmed preoperatively due to resource limitation and mass explored by transverse flank incision. At exploration left inferior triangle lumbar hernia was confirmed with a defect of 3cm by 2cm containing gangrenous sigmoid and part of ileum. For this additional midline laparotomy incision was made, gangrenous ileum and sigmoid resected and bowel continuity reestablished by ileoileostomy and colocolostomy. The lumbar defect was repaired using an interrupted silk suture with a USP size of 2.

Conclusion: strangulated hernia with gangrenous bowel obstruction is a rare clinical entity, the diagnosis of which is often delayed. CT scan plays a key role in diagnosis and in planning surgical approach. Flank surgical approach is used only for non-complicated cases.

Keywords: Gangrenous Bowel; Laparotomy; Lumbar Hernia; Obstruction; Strangulated

Background

Lumbar hernia is uncommon condition. The finding of combined gangrenous bowel obstruction in spontaneous lumbar hernia constitutes an extremely rare clinical entity. Although rare, they are important to diagnose because of the significant risk of complications: 25% will become incarcerated and 8% strangulated [1]. Unfortunately, lumbar hernia is rarely included in a differential diagnosis of a flank swelling. Because of its rarity and non-specific presentation, it can be easily confused with lipomas or other flank masses [2]. We present a case of strangulated petit lumbar hernia, confused with paravertebral abscess causing both small large bowel obstruction and requiring an emergency exploration. This case emphasizes the importance of considering lumbar hernia in patients with flank swelling, and preventing potential complications from missing the correct diagnosis.

Case Presentation

A 65-year-old female Ethiopian patient presented with left flank swelling and pain of 4 days duration. Associated with these she has low grade intermittent fever and over the last 2 days she did not pass feces or stool. But she doesn't have vomiting or abdominal distension. On further questioning she revealed that the swelling was there for the last 16 years but she doesn't have pain or other symptoms. Because it was without symptom she doesn't seek medical attention till now. Her past medical history was remarkable for completion of anti TB treatment for vertebral tuberculosis 20 years ago. Otherwise no personal or family history of hypertension, diabetes, cardiac illness or asthma. She has no history of trauma. For these symptoms she has gone to local health center and she was referred to Felege Hiwot Referrals hospital for further evaluation and management. On physical examination she was acutely sick looking with pulse rate 94 beat per minute, blood pressure 100/60 mmHg, and temperature of 37.5°C. In the left flank there was 10 cm by 10cm oval shaped mass just above the ileac crest in the inferior

lumbar triangle. It was erythematous on inspection and tender on palpation. On auscultation no evidence of bowel sounds heard on the mass. The other hernia sites are free. On investigation white cell count was $12.1 \times 10^3/\mu\text{l}$ with 89% neutrophils, Hgb 13.2gm/ dl and platelet was $272 \times 10^3/\mu\text{l}$. Sonographic evaluation was not conclusive considering lumbar hernia and paravertebral abscess as differential diagnosis and recommends computed tomography. Because of resource limitation CT scan was impossible. The only option at hand was to explore her after brief resuscitation. After general anesthesia and endotracheal intubation patient kept on right decubitus position and left lumbar incision was done to explore the mass (Figure 1).



Figure 1: Patient on left decubitus position and mass explored by right transverse flank incision.

At exploration left inferior triangle lumbar hernia was confirmed with a defect of 3cm by 2cm containing gangrenous sigmoid and part of ileum (Figure 2).



Figure 2: Gangrenous bowel revealed after exploration of the right flank mass.

At this point the incision and bowel covered by saline soaked normal saline and patient repositioned supine and additional midline laparotomy incision was made. This was done because resection of the gangrenous segment and anastomosis as well as peritoneal through lavage was impossible with the first incision alone. The sigmoid colon and ileum were mobilized lateral to medial and the hernia was reduced with external pressure by an assistant. After reduction the content was examined thoroughly revealed 25 cm of terminal ileum and about 20 cm of sigmoid colon were frankly gangrenous. About 200ml of dark hemorrhagic fluid also found in the general peritoneum. Necrotic ileum and sigmoid colon were resected, and bowel continuity was reestablished by ileoileostomy and colocolostomy. After a thorough peritoneal washing with normal saline the lumbar defect was repaired using an interrupted silk suture with a USP size of 2. This was the last option in our setup because of unavailability of mesh and appropriate size prolene suture. The postoperative course was uneventful. The patient was discharged on the eighth postoperative day. No recurrence was observed at 3-month follow-up so far.

Discussion and Conclusion

There are different classifications of the lumbar hernias. They can be acquired or congenital. Acquired hernias can be primary/ spontaneous and secondary. Primary (spontaneous) lumbar hernias may be with predisposition like old age, chronic lung disease, extremes of weight or muscular atrophy. Secondary lumbar hernias can occur following trauma, infections or due to surgical procedures [3]. In our case it is likely that she has developed spontaneous lumbar hernia 16 years ago but didn't seek medical attention. Lumbar hernias most commonly contain omentum or colon but herniation of other organs such as small intestine, perforated diverticulitis, spleen or kidney has been reported [4-6]. These hernias typically present with flank swelling and lower back pain. Presentation with gangrenous bowel obstruction containing necrotic part of sigmoid and ileum as in this case, is extremely rare. Because of its rarity and non-specific presentation, lumbar hernia can be easily confused with other pathologies that present as a superficial flank mass more commonly, for example lipomas [2,7] or paravertebral abscess as in our case.

In the vast majority of reported cases, but not ours, a definite diagnosis was made on a CT scan [6-8]. However, in our case, CT scan was not performed because of resource limitation. Ultrasound was performed, and it was inconclusive whether it is lumbar hernia or paravertebral abscess. The final diagnosis was done during exploration of the flank mass. Potentially, if CT was available the correct diagnosis would have been made, avoiding unnecessary flank incision and allowing laparotomy incisions from the outset. The presence of the lumbar hernia was considered earlier, on an ultrasound. Potentially, if this had been investigated further at that

time, the correct diagnosis could have been made earlier, avoiding the emergency admission with gangrenous bowel obstruction and allowing for elective repair with a less invasive flank approach. In conclusion; Strangulated hernia with gangrenous bowel obstruction is a rare clinical entity, the diagnosis of which is often delayed. Both clinical examination and Ultrasound may remain inconclusive. CT scan plays a key role in diagnosis and in planning surgical approach. Flank surgical approach is used only for non-complicated cases.

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