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Case Report

Internal hernia secondary to Fitz-Hugh-Curtis syndrome causing small bowel obstruction

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ABSTRACT

We present a 56-year-old female who presented with symptoms suggestive of a small bowel obstruction (SBO) in a virgin abdomen. Cross-sectional imaging and laparoscopy revealed an internal hernia through perihepatic adhesions that are likely representative of Fitz-Hugh-Curtis syndrome (FHCS). These adhesions were divided, the small bowel reduced, and she made an unremarkable recovery. This is the first reported case of an internal hernia from FHCS causing an SBO.

Keywords: Small bowel obstruction, Fitz-Hugh-Curtis, PID, Laparoscopy

INTRODUCTION

Small bowel obstruction (SBO) is a very common general surgical presentation. The majority of which are secondary to adhesions from previous operations and often respond well to conservative management. Less common causes of SBO include congenital band adhesions, volvulus, tumours, as well as abdominal wall and internal hernias.[1]

Fitz-Hugh-Curtis syndrome (FHCS) is a condition characterised by perihepatic adhesions from chronic pelvic inflammatory disease (PID).[2] These adhesions can rarely cause SBO, but there is no documentation of internal hernia secondary to these adhesions available in the literature.

CASE REPORT

A 56-year-old female with no past medical history or previous surgeries presented to the emergency department with 1 day of right upper quadrant pain, obstipation and vomiting. Observations were within normal limits. An abdominal exam revealed tenderness in the right upper quadrant and epigastrium. Investigations revealed a raised white cell count of 15.9×10^9/l and C-reactive protein of 5.4 mg/l. A computed tomography (CT) was obtained and showed displaced small and large bowel loops between the liver and the anterior abdominal wall, with proximal dilated small bowel loops. A transition point was noted to arise from a band extending from the lateral edge of the liver towards the lateral abdominal wall, consistent with a small bowel obstruction (SBO) (Figure 1). A nasogastric tube was inserted, and the patient was taken to theatre for a diagnostic laparoscopy.

At laparoscopy the distal small bowel was found to be herniated through a window in perihepatic "violin string adhesions" consistent with Fitz-Hugh-Curtis syndrome (FHCS), causing upstream obstruction (Figure 2). Haemorrhagic free fluid was noted and the offending adhesions were divided. The entire length of the small bowel was viable.

The patient denied any known history of pelvic inflammatory disease (PID) or sexually transmitted infections (STIs) but did have a history of unprotected sexual intercourse. An STI screen and urine microscopy, culture and sensitivity were unremarkable. An infectious diseases consult was sought, which concluded the patient likely had a previous history of PID. The patient was

discharged 2 days later and made an unremarkable recovery.

This is the second case of a SBO secondary to an internal hernia through FHCS adhesions in our department in 12 months.

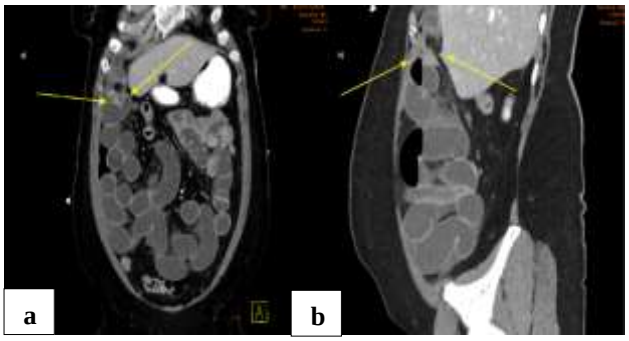

Figure 1: (a) Coronal and (b) sagittal views of CT abdomen showing focal transition point in the right upper quadrant (yellow arrows).

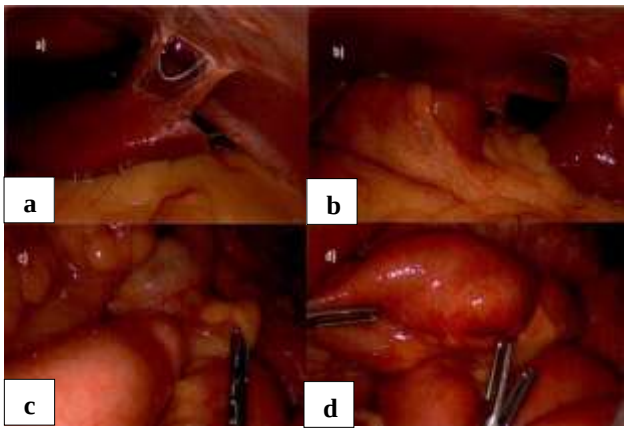

Figure 2: Images of diagnostic laparoscopy, showing (a) Fitz-Hugh-Curtis adhesions, (b) the herniated loops of small bowel into infradiaphragmatic space created by the adhesions (b-d).

DISCUSSION

SBOs are usually secondary to intrabdominal adhesions in the context of previous surgery.[1] The majority of adhesional SBOs can be managed conservatively. SBO in patients with a virgin abdomen should raise suspicion for a mechanical cause that won't respond to conservative treatment and warrants further investigation.[3]

There are cases of SBO secondary to FHCS in the literature, however this case is the first described case of a SBO secondary to an internal hernia from FHCS.[4-7] Internal hernias are protrusions of abdominal viscera through a peritoneal orifice into an abdominal or pelvic compartment. These orifices can be congenital or acquired via inflammation (as in this case), trauma or previous surgery, most commonly due to gastric bypass procedures.

Internal hernias most commonly manifest as a closed-loop SBO, however presentation can range from mild digestive symptoms to an acute abdomen.[8] The non-specific nature of presentation can lead to delayed diagnosis and treatment, which can have drastic consequences. Fortunately, in this instance, the acute nature of her presentation and CT findings warranted an early diagnostic laparoscopy.

FHCS is an uncommon condition characterised by inflammation of the liver capsule with adhesion formation that occurs in patients with previous or active PID. Typically, patients with FHCS are women of childbearing age and present with acute or chronic right upper quadrant pain. Many organisms can cause FHCS, but Chlamydia is most often involved. Microbes associated with PID are postulated to involve the liver through three main mechanisms: ascending infection into the peritoneal cavity via the fallopian tubes, lymphatic spread, and haematogenous spread.[2]

Whilst serological and radiological investigations can be suggestive of FHCS, a laparoscopy is the gold standard investigation. FHCS can be identified by direct visualisation of the "violin string" perihepatic adhesions to the anterior abdominal wall and diaphragm. The documented complications of FHCS include infertility and, rarely, SBO.[6]

CONCLUSION

This is the first documented case of a SBO secondary to an internal hernia through FHCS adhesions. This case emphasises the need to remain vigilant for alternative causes for an SBO other than simple adhesions, especially in patients with a virgin abdomen. A complete sexual history of women of childbearing age presenting with SBO ought to be routine. Failure to rapidly diagnose and manage these patients can have dire consequences. In this case, prompt assessment and laparoscopy resulted in a simple adhesiolysis and an unremarkable recovery, without necessitating resection of the involved small bowel.

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REFERENCES

1. Schick MA, Kashyap S, Meseeha M. Small Bowel Obstruction. 2023. In: StatPearls. Treasure Island (FL): StatPearls Publishing. 2023.
2. Basit H, Pop A, Malik A, Sharma S. Fitz-Hugh-Curtis Syndrome. 2023 Jul 3. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing. 2023
3. Bower KL, Lollar DI, Williams SL, Adkins FC, Luyimbazi DT, Bower CE. Small Bowel

Obstruction. Surg Clin North Am. 2018;98(5):945-71.
4. Hayakawa H, Suenaga M, Tobinaga J, Takeuchi Y, Uchimura M, Nomura N, et al. A Operated Case of Ileus Caused by Perihepatitis (Fitz-Hugh-Curtis Syndrome) Supposedly due to Chlamydia Trachomatis Infection. Japanese J Gastroenterol Surg. 2001;34(8):1331-5.
5. Sia ZK, Trautman J, Yabe TE, Wykes J. A Rare Case of Small Bowel Obstruction in a Patient with Endosalpingiosis, Fitz-Hugh-Curtis Syndrome, and Chlamydia trachomatis Pelvic Inflammatory Disease. Case Rep Surg. 2022;2451428.
6. Al-Ghassab RA, Tanveer S, Al-Lababidi NH, Zakaria HM, Al-Mulhim AA. Adhesive Small Bowel Obstruction due to Pelvic Inflammatory Disease: A Case Report. Saudi J Med Med Sci. 2018;6(1):40-2.
7. Haumann A, Ongaro S, Detry O, Meunier P, Meurisse M. Acute pelvic inflammatory disease as a rare cause of acute small bowel obstruction. Acta Chir Belg. 2019;119(5):328-30.
8. Lanzetta MM, Masserelli A, Addeo G, Cozzi D, Maggialetti N, Danti G, et al. Internal hernias: a difficult diagnostic challenge. Review of CT signs and clinical findings. Acta Biomed. 2019;90(5-S):20-37.

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