

Internal Hernia through the Broad Ligament Presenting with Acute on Chronic Intestinal Obstruction: A Case Report

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ABSTRACT

Background: Internal hernias are rare. Their occurrence through the broad ligament is one of the rarest forms. We present a report of a 45 year Nigerian female with acute on chronic intestinal obstruction due to an internal hernia of the broad ligament.

Methods: Patients case notes and a review of relevant literature using manual library and Medline search was used.

Results: A 45-year-old multiparous woman presented with a ten-year history of features of partial intestinal obstruction, and no previous abdominal surgery. Examination revealed right iliac fossa tenderness and a plain abdominal radiograph showed air fluid levels. Conservative management was not successful and laparotomy confirmed an internal hernia of the right broad ligament which was repaired with satisfactory outcome.

Conclusion: This report is to highlight the fact that though rare, internal hernia should be considered in the differential diagnosis of intestinal obstruction.

KEYWORDS: Internal Hernia; Broad ligament; Intestinal obstruction.

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INTRODUCTION

Internal herniation of the intestine through the broad ligament is a rare cause of intestinal obstruction in surgical practice^{1,3}. Defects of the broad ligament or omentum among others, are areas where internal herniation of bowel may occur and such defects may be either congenital or iatrogenic, following laparotomies, or laparoscopic procedures^{4,5}.

It is usually a diagnostic challenge often presenting as adhesive intestinal obstruction and when it occurs in patients with no previous history of abdominal operations, the diagnosis may only be made at laparotomy⁶. A delay in diagnosis and surgical intervention may lead to bowel infarction, which necessitates bowel resection. The similarity with adhesive intestinal obstruction, for which conservative management is an important modality of treatment, makes it challenging. This is especially so, with surgeons practicing in areas, where computerized tomography and other imaging

Techniques, that could help distinguish between adhesive intestinal obstruction and internal hernia³, are unavailable.

CASE HISTORY

A 45-year old, para 4, woman was admitted to the surgical ward of the Osun state general hospital Asubiaro, Osogbo with an 8-day history of colicky periumbilical abdominal pain of sudden onset, associated with vomiting and mild abdominal distension. She was a known peptic ulcer disease patient diagnosed six years earlier and had been given antiulcer medication with complete relief of symptoms. Her pain had no aggravating or relieving factors and there was no associated fever. Her last bowel motion was seven days before admission. She had been admitted and treated for partial intestinal obstruction, four weeks before onset of symptoms, and was discharged home when she was tolerating oral feeds and was moving her bowel regularly.

She admitted to having had similar symptoms intermittently over the last 10 years with a periodicity of 3 to 6 months but her symptoms usually subsided on self-medication. There was no previous history of abdominal or gynaecological surgeries and her last menstrual period was eight days before presentation. There was no vaginal discharge or fever. She had a copper T intrauterine contraceptive device (IUCD) inserted seven years before.

General examination revealed an anxious woman in intermittent painful distress. She was not pale or febrile. The pulse rate was 70 beats/min and the blood pressure was 140/90 mmHg. Abdominal examination revealed a soft abdomen with tenderness in the right iliac fossa and hypogastrium. There was neither guarding nor rebound tenderness. No mass was palpable and bowel sounds were normoactive. Rectal examination revealed no abnormality. A plain abdominal X-ray showed dilated small bowel loops with air/fluid levels. An abdominopelvic ultrasound confirmed the IUCD to be in place. No adnexal masses were seen. A clinical diagnosis of adhesive intestinal obstruction was made and the patient was commenced on conservative management with nasogastric decompression and intravenous fluid therapy with Hartman's solution and 5%dextrose in

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saline. After 72 hours, her condition did not improve and so she had an exploratory laparotomy. Findings at surgery included herniation of loops of the ileum and transverse colon through a rent in the broad ligament on the right below the round ligament. There was proximal dilation of the small bowel as well as oedema of herniating loops with adhesive bands between the transverse colon and round ligament. There was no defect on the left broad ligament. The adhesive bands were lysed and the round ligament divided to enable the reduction of the herniated bowels, which were still viable. The defect in the broad ligament was repaired using chromic catgut 2/0 sutures. Other intraabdominal organs were normal. The patient had an uneventful postoperative recovery, was discharged home on the seventh postoperative day in good health and is being followed up in the surgical out patient clinic.

DISCUSSION

Internal hernias are rare and constitute about 1% of all hernias⁷. Herniation of bowel through the broad ligament constitute about 4-7% of internal hernias⁸. They may be congenital or acquired in origin and either of these causes could be the underlying reason in this patient. The former are due to developmental defects while the latter are due to birth or operative trauma, pregnancy and pelvic inflammatory disease⁸. The congenital defects may be unilateral or bilateral. The small intestine alone is most often affected but the colon may also be affected⁹, or a combination of both as in the case presented.

The diagnosis of internal hernia requires a high index of suspicion when managing female patients who present with features of intestinal obstruction. This is especially so when practicing in an environment with limited modern radiologic imaging facilities. This patient had not been diagnosed with internal hernia despite having recurrent symptoms for ten years. The Preoperative diagnosis is difficult. Significant factors for diagnosis include multiparity, previous obstetric or gynaecological operations, features of mechanical intestinal obstruction and a parauterine mass^{4,5}. Our patient was multiparous though she had no previous history of gynaecological operations and no parauterine mass. Physical examination may not be sufficient to distinguish internal hernia from other causes of intestinal obstruction. This patient had only a vague tenderness in the right iliac fossa and the hypogastrium.

The role of Computerised Tomography (CT) and spiral CT in diagnosis is now established¹⁻⁴ but these are not readily available or accessible in our environment. These facilities are usually located in tertiary health institutions far away from most general hospitals, and are expensive. Laparoscopy will confirm the diagnosis and laparoscopic repair of hernia of the broad ligament has been described⁸. Timely surgical intervention is essential, to prevent other complications of hernia such as gangrene and perforation^{6,7}. It is important for surgeons to keep in mind the possibility of internal hernias when managing patients who present with chronic intestinal obstruction. Prompt surgical intervention may be advisable when such patients develop acute exacerbation of symptoms to avert possible sequelae of delayed intervention in obstructed internal hernias.

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