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Spontaneous entero-labial fistula complicating Richters hernia: Report of a case



S.N. Elenwo*, P.O. Igwe, R.S. Jamabo, U.S. Sonye

Department of Surgery, University of Port Harcourt Teaching Hospital Port Harcourt (UPTH), Rivers State, Nigeria

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ABSTRACT

BACKGROUND: Richter's hernia is defined as a type of hernia in which only part of the circumference of the antimesenteric border of a bowel wall is incarcerated within the hernia sac leading to ischemia, gangrene and perforation of the hollow viscus. Richter's hernia is known to cause strangulation without obstruction due to involvement of only a part of the circumference of a bowel wall. Inguino-labial Richter's hernia presenting with the complication of spontaneous entero-cutaneous fistula is rare.

AIM: This is to report a case of spontaneous entero-labial fistula complicating Richters hernia occurring in an adult female.

CASE REPORT: A 61-year-old woman presented with a history of sudden generalized abdominal pain. She had a prior history left inguino-labial swelling of six years duration, which was initially reducible but became irreducible two weeks prior to presentation. There was associated discharge from the swelling a few days later. She was pale and febrile. Her temperature was 39.2 °C, pulse rate was 110 per minute and blood pressure was 130/60 mmHg. A diagnosis of left inguinolabial hernia was made.

She was resuscitated and an exploration of the groin swelling was made. A rupture of the antimesenteric border of the ileum with strangulated preperitoneal fat was found. She had resection and anastomosis of the ileum.

CONCLUSION: Spontaneous faecal fistula in inguinal region following rupture of strangulated Richter's hernia especially in adults is uncommon and can occur even in absence of obstructive symptoms. In presentation of any groin swelling, there is need for an early accurate diagnosis followed by prompt treatment. The delay in its diagnosis and management may result in this rare complication of spontaneous faecal fistula. This reflects the state of health care in the developing world and needs to be addressed by the concerned authorities.

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1. Introduction

Richter's hernia is named after the German surgeon, August Gotlieb Richter, who gave the first description of this type of hernia in 1778 [1]. Richter's hernia is an uncommon condition in which only part of the circumference of the antimesenteric border of a bowel wall is incarcerated within the hernia sac leading to ischemia, gangrene and perforation of the hollow viscus [1]. It occurs at various positions with the femoral ring being the most common [2]. It has an early misleading presentation with tendency to early strangulation and the lack of obstructive symptoms which may lead to delay in diagnosis and hence increased mortality [2]. Spontaneous enterocutaneous fistula can be the presentation of a neglected case. It is even rarer in adult females. This is the first reported case in our centre.

2. Case report

A 61-year-old woman who presented with a history of sudden onset of generalized abdominal pain of two days duration. There was no associated constipation, abdominal distension, nausea or vomiting. She had had a prior history of a reducible left inguino-labial swelling of six years duration. This became irreducible two weeks prior to presentation. The swelling got inflamed and opened up spontaneously and started discharging frank pus. She had no urinary symptoms, fever, jaundice or co-existing medical ailment. There was no past surgical history.

Examination revealed a middle aged woman in painful distress. She was pale, febrile and anicteric. Her pulse rate was 110 per minute and blood pressure was 130/60 mmHg and respiratory rate 28 cycles per minute. Her temperature was 39.2 °C. Her chest was clinically clear. The abdomen was soft and mildly tender. There was a left groin mass which was irreducible. The skin over the groin mass was inflamed, desquamated and was discharging purulent fluid. Bowel sounds were hyperactive. Digital rectal examination

* Corresponding author.

E-mail address: snelenwo@yahoo.co.uk (S.N. Elenwo).



Fig. 1. Ruptured left inguino-labial hernia.

revealed a little stool in the rectum. A diagnosis of spontaneous rupture of a strangulated left inguino-labial hernia was made.

The hematocrit was 9 g/dl (27%) and serum electrolyte urea and creatinine results were within normal limits. She was resuscitated with intravenous fluids (normal saline, dextrose in saline infusion), antibiotics (ceftriaxone 1 gm, metronidazole 500 mg) and analgesics were also given. Urethral catheterization was done to monitor urine output. Within a few hours of admission, she had an exploration through the groin. Intra-operative findings were an indirect inguinal Richter's hernia involving a segment of the ileum with marked necrosis and infection of the subcutaneous fascia and the overlying skin (Figs. 1 and 2). There was an opening on the involved segment of the ileum. A resection and anastomosis of ileum, the segment involved was carried out with herniorrhaphy. Post operatively, she had intravenous infusions for four days, antibiotics and analgesics. She had a wound infection and breakdown and was treated with antibiotics and wound dressings.

3. Discussion

Though in 1598, Fabricius Hildanus [3], reported the earliest known case of a Richter's hernia but Richter's hernia is named after the German surgeon, August Gottlieb Richter, who gave the first description of this type of hernia in 1778 [1]. Singh et al. reported a rare case of spontaneous inguinal faecal fistula as a complication of incarcerated Richter's hernia with brief review of literature [4].

Richter's hernia occurs in small hernia rings large enough to entrap the partial circumference of the bowel wall. It is usually small enough to prevent protrusion of an entire loop of the intestine. The firm margins commonly occur in the femoral ring (72–88%), followed by inguinal canal (12–24%) and the abdominal wall incisional hernias (4–25%). Several cases have been reported at laparoscopic port insertion sites [5].

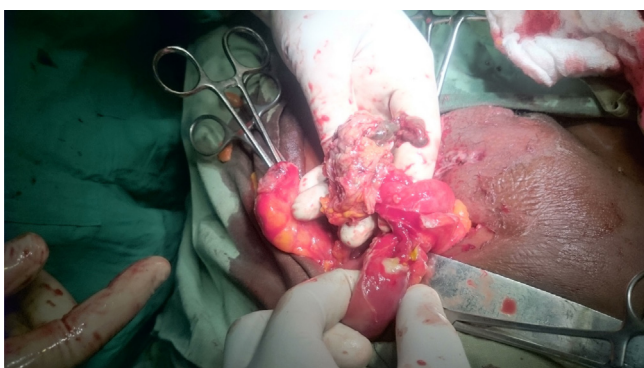


Fig. 2. Segment of the involved ileum with arrow showing the perforation.

Any part of the intestine may get incarcerated but the distal ileum is most commonly involved as seen in our index case, followed by the caecum and sigmoid colon [2]. As only a segment of bowel is involved, luminal continuity is maintained, leading to only partial intestinal obstruction with minimal clinical signs [2].

The pathologic changes taking place in the formation of a faecal fistula are as follows. There is an exudation of a bloody fluid into the hernial sac and with impairment of integrity of the bowel and infection of the fluid. As the sac wall becomes infected and edematous, the bowel perforates into, and then through the sac, thereby involving the external hernia coverings. Infection and necrosis then spread rapidly through the subcutaneous tissues, and finally rupture occurs externally through the skin, forming an external faecal fistula [6].

Richter's hernia could be classified into three clinical groups according to the presentation of this disease. The first is the obstructive group characterised by nausea, vomiting, peritonitis and constipation which if untreated leads to shock. The second group was post necrotic group characterised by strangulation with necrosis and perforation causing enterocutaneous fistula. The third group was dangerous group which includes patients with minimal abdominal signs [7]. This group has the maximum morbidity and mortality owing to delay in diagnosis. Our index case falls into the second group in which there was strangulation with necrosis and perforation causing an enterocutaneous fistula.

The development of spontaneous labial faecal fistula secondary to incarcerated inguinal hernias is much rarer among the adult female population as compared to the pediatric age group. Most of these spontaneous faecal fistula that have been reported from developing countries like India and Nigeria [8] were in children and is usually the result of poverty, lack of ignorance, neglect, late presentation and lack of proper management [9].

Strangulation in an undiagnosed or neglected Richter's hernia occurs very rapidly. In a review of 146 strangulated hernias, 45 (30.8%) of them were found to be Richter's hernia. Among the 45 patients, necrosis of the bowel wall had occurred in 31 (68.9%) patients but among rest 101 strangulated hernias, bowel necrosis occur in only 25 (24.8%) patients [10]. This reflects the speed of strangulation in Richter's hernias. Although spontaneous enterolabial fistula in a strangulated Richter's hernia is uncommon, our index case presented with a fistula. From the literature review, some researchers, Onakpoya et al. [11] and Guzzo et al. [12] reported perforation with formation of Fournier's gangrene in neglected Richter's inguinal hernia.

Although fistulation allows decompression of the bowel and temporary relief of the intestinal obstruction. Unrelieved strangulation will, however, increase the likelihood of septic complications and mortality associated with intestinal obstruction. Therefore, urgent surgical exploration with bowel resection and end-to-end anastomosis is necessary to avert this [13]. Our index case had exploration of the groin with bowel resection of the affected segment of the ileum and end-to-end anastomosis. Although opinion varies in literature interns of approach to surgical exploration but access or route of operation is generally patient dependent. Bätz et al. [14] noted that the possibility of the existence of a perforated parietal hernia should always be considered in necrotising inflammations in the inguinal and vulvar regions, even if abdominal signs and symptoms are absent. Also local restriction of extension into the abdominal cavity occurs because of narrowed hernia orifice, since intestinal patency is usually maintained. Surgical exploration could be done via midline. In the index case trans-inguinal approach was used to assess the initial state of the content of hernia. Anastomosis was easy to be carried out through same route because a small bowel with localized necrosis was encountered, bowel (ileum) was easily mobilised. Post operatively, the index case had

wound infection and was adequately covered with broad spectrum antibiotics and daily wound dressings till she was due for discharge.

4. Conclusion

Spontaneous faecal fistula in inguinal region following rupture of strangulated Richter's hernia especially in adults is uncommon and can occur even in the absence obstructive symptoms. In presentation of any groin swelling, the need for an early and accurate diagnosis followed by prompt treatment cannot be overemphasized. Awareness of a possible fistulation of an obstructed inguinal followed by prompt surgical intervention will prevent the development of this complication.

Competing interests

The author(s) declare that they have no competing interests.

Ethical approval

Written informed consent was obtained from the patient involved.

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Consent

Written informed consent was obtained from the patient for publication of this Case report and any accompanying images.

Authors' contribution

All authors read and approved the final manuscript. S.N.E.—conception and design and have given final approval of the version to be published and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. P.O.I.—design and drafting the manuscript and also agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Acquisition of data, or analysis and interpretation

of data and drafting the manuscript. U.S.S.—acquisition of data, or analysis and interpretation of data. R.S.J.—acquisition of data and revising it critically for important intellectual content.

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