

## Case Report

# A case of Richter's hernia presenting after a previous inguinal herniorrhaphy

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### ABSTRACT

Richter hernia also known as partial enterocele is the protrusion or/and strangulation of only a part of the circumference of the intestinal antimesenteric border through a small defect of the abdominal wall. These comprise around 10 percent of strangulated hernias, which itself represent a small percent in overall hernia cases, hence are very rare. If left untreated, the affected bowel segment becomes ischemic and finally gangrenous, and it should be kept in mind that patients with Richter hernia develop gangrene much faster than 'ordinary' strangulated hernias. This is a case report of a 69-year-old male with a history of herniorrhaphy for left inguinal hernia 22 years back presenting with swelling in left groin region for 4 days with sudden onset of left-sided acute abdominal pain and vomiting for 1 day. Ultrasound Abdomen suggested left sided obstructed inguinal hernia with enterocele with fatty liver. X-Ray abdomen showed multiple air fluid levels. The swelling was explored through incision located over it. Sac was identified and a Richter-type hernia was seen deep inside with small bowel strangulated only in a part of its circumference. Resection and anastomosis of approx. 10 cm was done for the gangrenous part and gut reduced back into abdominal cavity and sac closed. Richter's hernia is associated with a strikingly high death rate which emphasizes the seriousness of this condition. Once the diagnosis is made, urgent operation must be carried out to avoid morbidity and mortality.

**Keywords:** Richter's hernia, Enterocele

### INTRODUCTION

Richter hernia also known as partial enterocele is the protrusion or/and strangulation of only a part of the circumference of the intestinal antimesenteric border through a small defect of the abdominal wall.<sup>2</sup> These comprise around 10 percent of strangulated hernias, which itself represent a small percent in overall hernia cases, hence are very rare.<sup>2,3</sup> Richter hernia presents very subtly, and progresses to gangrene rapidly.<sup>1</sup>

Ultrasonography and Computed Tomography can facilitate or confirm the clinical diagnosis.<sup>3</sup> Urgent

surgery is the mainstay of management and manual reduction should never be attempted.<sup>1</sup>

If left untreated, the affected bowel segment becomes ischemic and finally gangrenous, and it should be kept in mind that patients with Richter hernia develop gangrene much faster than 'ordinary' strangulated hernias<sup>1</sup>. These types of hernias may often have delayed diagnosis or even misdiagnosis as intestinal obstruction is often absent since the lumen of the gut usually remains open. Richter hernia has a significantly high mortality rate of 17% to 21%; the prognosis is particularly unfavourable if peritonitis develops.<sup>1</sup>

## CASE REPORT

A 69-year-old male with a history of herniorrhaphy for left inguinal hernia 22 years back, presented to the Emergency Department with swelling in left groin region for 4 days with sudden onset of left-sided acute abdominal pain and vomiting for 1 day. On physical exam, he was hypertensive, had tachycardic and tenderness in the left lower quadrant with a swelling in left inguinal region which was irreducible and firm in consistency with tenderness over it. The provisional diagnosis made was left inguinal obstructed hernia.

Ultrasound abdomen suggested left sided obstructed inguinal hernia with enterocele with fatty liver. X-ray abdomen showed multiple air fluid levels (Figure 1).

His white blood cell count was 6200 cells/ $\mu$ L blood with deranged urea 123mg/dl and creatinine 2.84mg/dl.



**Figure 1: Erect abdominal x-ray showing multiple air fluid levels.**

The patient was given intravenous fluids, broad-spectrum antibiotics and taken to the operating room immediately. Under spinal anesthesia, the swelling was explored through incision located over it. Sac was identified and a Richter-type hernia was seen deep inside with small bowel strangulated only in a part of its circumference. The defect was estimated to be about 3 cm in diameter (Figure 2). Resection and anastomosis of approx. 10 cm was done for the gangrenous part and gut reduced back into abdominal cavity and sac closed. Posterior wall defect was repaired with vicryl and prolene. Left

orchidectomy was also done to assist in repair and incision was closed in layers.

The patient's post-op course was uneventful and he was discharged a few days after surgery tolerating regular diet.



**Figure 2: Intra-operative picture showing gangrene of only a part of the circumference of the antimesenteric border of the small bowel.**

## DISCUSSION

Richter's hernia is a highly deceptive entity and has a high mortality, although it can be reduced by early accurate diagnosis and early operation for the same. It is deceptive because the strangulation may start early and often there is absence of obstructive symptoms.<sup>5</sup> The high mortality which is found in this has mainly resulted from misdiagnosis, delayed diagnosis and/or delayed operation.

Normally, patients with Richter's hernia are 60 to 80 years old.<sup>2</sup> The patient would usually present initially with innocuous symptoms and little clinical findings which may include vague abdominal pain and malaise.<sup>5</sup> Although the patient may have nausea and vomiting but it would be less severe than what is present in cases of strangulated hernias.<sup>5</sup> The most common clinical finding is tenderness and swelling over the hernia orifice; if there is local gangrene of the intestinal wall then the overlying skin may be inflamed, which would often lead to misdiagnosis as a local abscess.<sup>1</sup> Often an enlarged lymph node in Richter's hernia of the femoral canal may be misdiagnosed as acute lymphadenitis.<sup>5</sup>

Radiological investigations are very helpful in establishing or confirming the diagnosis.<sup>6</sup> Ultrasonography and/or computed tomography (CT) is an excellent tool allowing clear visualization and for reaching to an exact diagnosis or for confirming the clinical diagnosis if made.<sup>1</sup> Abdominal x-ray may be helpful in showing features of ileus like dilated bowel loops and air fluid levels.

Once the diagnosis is made, urgent operation must be carried out as if surgery is delayed, perforation into other

compartment such as vulva, thighs or peritoneal cavity may happen and has shown severe morbidity and mortality.<sup>1,5</sup> It should be remembered that manual reduction should be avoided as it may lead to perforation due to inadvertent reduction of gangrenous bowel. Once patient is taken on the operating table, findings are confirmed, resection and anastomosis of the affected gangrenous gut is done.<sup>2</sup> Patient is initially kept nil per oral with adequate intravenous fluids and IV antibiotics. Gradually over time oral diet is started.

## CONCLUSION

Richter's hernia is associated with a strikingly high death rate which emphasizes the seriousness of this condition. Irrespective of availability of modern and sophisticated radiological investigations the prognosis can only be improved by keeping a differential diagnosis of this deceptive disease in patients of uncharacteristic abdominal pain especially in patients with a history of prior surgeries. Early diagnosis and prompt surgery remains utmost important so as to improve the mortality and morbidity in these patients.

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