Case Report

Richter's Hernia: A Case Report

Shahid Nazir, Sahrish Sulman, Ambreen Munir, Aneeta Kumari, Sehrish Shah Rehmat

ABSTRACT

Richter's hernia (partial enterocele) is rare disease in which there is a swelling or/and entrapment of a small part of intestine along its antimesenteric border due to minor defect in abdominal wall. Diagnosis of Richter's hernia & their associated complications are difficult due to absence of obstructive symptoms with presence of early strangulation thereby increases mortality to 20-60%. For early diagnosis of Richter's hernia ultrasonography and computed tomography (CT) are utilized and emergency surgery is necessary to obviate complications of disease. Here, we are presenting a case of 20-year male patient reporting for abdominal pain radiating to right hypochondria, anorexia and low-grade fever for 24 hours in which an incidental diagnosis of Richter's Hernia along with acute appendicitis was made.

KEYWORDS: Richter's hernia, diagnostic difficulty, mortality & morbidity.

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INTRODUCTION

Richter's hernia; a very rare disease, also called partial enterocele is a medical emergency. It is the swelling or/and squeezing of a small part of intestinal antimesenteric border due to minor defect in abdominal wall[1]. Richter's hernia is non-obvious and rapidly progressive disorder leading to ischemia, gangrene and/or perforation of hollow viscus[2,3]. Most affected persons are older age people with age ranging from 61-79 years, although infants are also reported in few cases. It occurs at different locations; among which femoral ring is most common (36-88%) followed by the inguinal ring (12-36%) and abdominal wall (4-25%). 5-15% of patients with Richter's hernia present in a state of strangulation[3-5].

Richter's hernia's symptoms and signs vary from mild disease to exacerbated state depending upon the duration of disease. Symptoms may be localized which includes presence of mass in groin with or without pain or abdominal like nausea, vomiting, intense abdominal cramping pain, abdominal distension or systemic such as fever, malaise[5]. For early diagnosis ultrasonography and computed tomography (CT) are used and emergency surgery is performed to avoid associated complications[2].

Inappropriate delay or if left untreated for long, it may cause ischemia of herniated bowel segment that leads to gangrene. It may also cause abscess formation leading to enterocutaneous fistula in case when perforation develops. Rate of gangrene formation in Richter's hernia is faster as compared to other varieties of hernia[2,6]. Richter's hernia's diagnosis is difficult due to presence of early strangulation and absence of obstructive symptoms that increases mortality to 20-60%[2-5]. Inappropriate medical treatment and unawareness about Richter's hernia are the major risk factors that are responsible for higher complications and mortality. Here, we are presenting a case of 20-year male patient with the diagnosis of Richter's hernia.

CASE REPORT

A 20-year male patient admitted at surgical emergency department of Liaquat University hospital Hyderabad. He was experiencing moderate abdominal pain radiating to right hypochondrium, anorexia and low-grade fever for one-day. After admission abdominal pain was radiated to right iliac fossa. There was no history of vomiting, absolute constipation or abdominal distension. Patient had no-significant family history, medical history and surgical history. On general physical examination, patient was anxious and tachycardiac (110 beats/minute). On abdominal examination, deep tenderness with guarding was present at right iliac fossa. A superficial firm lump of 2 x 2 cm was noticed at right groin area that was tender to touch and warm. Cough impulse and reducibility test result were not present. External genital and digital rectal examinations were normal. Laboratory result of blood reveals raised leucocyte count to 15000 with neutrophilic shift to 90%. Hepatic profile and renal function tests were normal. Radiological investigations were also unremarkable. Patient was diagnosed as a case of acute appendicitis having Alvarado's score of 6 along with right inguinal lymphadenitis. Patient was operated for emergency appendectomy within 6 hours of admission via gridiron incision. During surgery clear fluid of about 30 cc was

aspirated. Blunt dissection with finger revealed something adherent to right deep inguinal ring. Incidental diagnosis of Richter's hernia was made due to presence of herniated omentum along with antimesenteric border of terminal ileum protruding out at deep inguinal ring. Primary reduction of omentum along with ileum was carried out, stitches applied at deep ring internally with Vicryl-1 and bowel viability was assessed & found normal. A small patch of omentum was found gangrenous that was excised. Appendix was found inflamed and thickened with healthy base, appendectomy was performed as well. Post-operatively, patient was kept nothing per oral for 24 hours, followed by liquid and soft diet. He was discharged on second day of surgery & follow up visit was advised at 10th postoperative day. On follow up, patient was stable with normal wound. Histopathology of appendix revealed acute serositis with no findings of malignancy. **C**ounseling was made with the patient that hernia needs to be operated 4 weeks after this surgery.

DISCUSSION

Richter's hernia is the type of hernia in which small segment of antimesenteric side of intestinal loop is protruded through small hernia ring. In year 1598, Fabricius Hildanus described the first case of Richter's hernia. Then in 1778, German surgeon August Gottlieb Richter introduced the 1st scientific description of the disease[4-6]. In year 1897, Sir Frederick Treves describes the Richter's hernia as protrusion of small part of circumference of intestine in which the protruded part carries significant risk of becoming gangrenous[4,7].

This occurs due to the fact that a small defect or ring allows only partial circumference of the gut to protrude out while limiting protrusion of whole circumference of bowel. Distal ileum is the most frequently incarcerated part of intestine followed by caecum and sigmoid colon. As in Richter's hernia only partial circumference of the bowel is protruded out so luminal continuity remains intact thereby causing partial or no obstruction of intestine with minimal or no sign and symptoms of intestinal obstruction[3,4].

It is categorized into 3 groups depending upon the presentation of patients. The 1st group is obstructive group in which patient presents with abdominal pain, nausea, vomiting, absolute constipation. These symptoms may worsen and leads to shock if left untreated. The 2nd group is post-necrotic group in which patient presents with strangulation of herniated segment along with gangrene and perforation that may lead to enterocutaneous fistula. In the 3rd group patient presents with either no or only minimal abdominal sign and symptoms leading to delay in diagnosis. This delay in diagnosis may lead to high rate of complications thereby high morbidity and mortality[3].

Diagnosis of Richter's hernia is difficult due to presence of nonspecific & infrequent initial clinical findings. Therefore, different imaging tests are required to establish diagnosis like X-ray Abdomen, ultrasonography (US) and computed tomography (CT). Plain X-ray images may show mechanical ileus signs with distension of bowel loop, intestinal fold thickening and air fluid levels. Ultrasonography is a non-invasive technique that reveals protruded segment of bowel with or without vascular compromise if doppler study is included. Computed tomography is more advanced & accurate in supporting the diagnosis of Richter's hernia & its associated complications like intestinal obstruction, ischemia, gangrene and abscess[5,8].

An emergency surgery for Richter's hernia has profound impact on the outcome of disease & prognosis. Surgical treatment of Richter's hernia involves two different approaches depending upon the presence or absence of inflammation and necrosis. In the first approach when there is no ischemia of bowel, repair of Richter's hernia defect is made after confirmation of viable status of bowel through one incision. Whereas in presence of inflammation and ischemia, two-stage approach is utilized. In first stage infection or ischemia is dealt and in the second stage Richter's hernia is repaired[1,5].

It was concluded that Richter's hernia is a difficult diagnosis associated with high mortality rate if not detected & treated at early stage.

REFERENCES

1. Skandalakis PN, Zoras O, Skandalakis JE, Mirilas P. Richter hernia: surgical anatomy and technique of repair. Am Surg. 2006; 72(2): 180-4.
2. Bali S, Utaal MS, Garg N. A case of Richter's hernia presenting after a previous inguinal herniorrhaphy. Int Surg J. 2016; 3(3): 1688-90. doi: 10.18203/2349-2902.isj20162778.
3. Elenwo SN, Igwe PO, Jamabo RS, Sonye US. Spontaneous entero-labial fistula complicating Richters hernia: report of a case. Int J Surg Case Rep. 2016; 20:27-9. doi: 10.1016/j.ijscr. 2016.01.003
4. Dongmo T, Nkeck J, Ngah E. Richter's hernia: two observations in the Baka pygmies of Eastern Cameroon. Int J Case Rep Images. 2017; 8(11): 689-91. doi: 10.5348/ijcri-201713-CS-10092.
5. Kang CH, Tsai CY. Richter's femoral hernia manifested by a progressive ileus. Formos J Surg. 2014; 47(5): 193-6.
6. Ahi KS, Moudgil A, Aggarwal K, Sharma C, Singh

K. A rare case of spontaneous inguinal faecal fistula as a complication of incarcerated Richter's hernia with brief review of literature. BMC Surgery. 2015; 15: 67.
7. Steinke W, Zellweger R. Richter's hernia and Sir Frederick Treves: an original clinical experience, review, and historical overview. Ann Surg. 2000; 232(5): 710-8.
8. Lassandro F, Iasiello F, Pizza NL, Valente T, di Santo Stefano ML, Grassi R, et al. Abdominal hernias: Radiological features. World J Gastrointest Endosc. 2011; 3(6):110-117.

AUTHOR AFFILIATION:

Dr. Shahid Nazir *(Corresponding Author)*
Department of Surgery
Liaquat University of Medical and Health Sciences (LUMHS), Jamshoro, Sindh-Pakistan.
Tel. 03013509618
Email: shahidnazir2702003@yahoo.com
nazirshahid516@gmail.com

Dr. Sahrish Sulman
Department of Surgery
LUMHS, Jamshoro, Sindh-Pakistan.

Dr. Ambreen Munir
Department of Surgery
LUMHS, Jamshoro, Sindh-Pakistan.

Dr. Aneeta Kumari
Department of Surgery
LUMHS, Jamshoro, Sindh-Pakistan.

Dr. Sehrish Shah Rehmat
Department of Surgery
LUMHS, Jamshoro, Sindh-Pakistan.