International Journal Dental and Medical Sciences Research
Volume 3, Issue 2, Mar-Apr. 2021 pp 1105-1107 www.ijdmsrjournal.com ISSN: 2582-6018

# Femoral Richter's Hernia

Dr. Abinaya Karthikeyan, Prof. Anantharamakrishnan, Dr. Kishore. D.
[1] *Junior Resident, General surgery, Chettinad hospital and Research Institute, Chennai, India.*
[2] *Professor, General surgery, Chettinad hospital and Research Institute, Chennai, India.*
[3]*Assistant Professor, General surgery, Chettinad hospital and Research Institute, Chennai, India.*
*Corresponding Author: Dr. Abinaya Karthikeyan*

Submitted: 25-04-2021 Revised: 06-05-2021 Accepted: 08-05-2021

**ABSTRACT:** Femoral hernias have been found to be relatively uncommon cause of unexplained bowel obstruction. Diagnosis could be delayed because strangulated femoral hernia may not always present with typical groin swelling and signs of strangulation. We report a case of 55-year old female presenting with vomiting for 7 days, with a non-tender swelling in right groin on examination. On exploration, Richter's type of femoral hernia with part of small bowel wall as content which was non-viable was found for which resection and anastomosis followed by femoral hernia repair was done.

## I. CASE REPORT :

A 55-year old, post-menopausal woman presented to the Casualty with complaints of diffuse abdominal pain and distension with vomiting for the past 5 days, and obstipation for the past 2 days. She complained of vomiting which was non projectile, profuse about 4 to 5 episodes per day, watery mixed with food contents, non-foul smelling, non-bilious, not blood stained. There was no history suggestive of any swelling or pain in the groin region. She denied history of fever, burning micturition or loss of weight and appetite. She denied previous history of abdominal surgery and her medical history was non-contributory. She appeared to be dehydrated. Systemic examination was unremarkable. Per abdominal examination revealed diffuse tenderness with guarding, no organomegaly. Right groin examination demonstrated 3 x 2 cm, firm, non-tender, irreducible swelling with no cough impulse (Figure 1). Left groin was normal. Laboratory data were unremarkable. On digital rectal examination findings were unremarkable except for impacted stool. Per vaginal examination revealed Uterovaginal prolapse with cystocoele. X-Ray abdomen showed multiple air-fluid levels. Ultrasound imaging of the abdomen showed dilated bowel loops with inter-bowel fluid with sluggish peristalsis. Contrast-enhanced CT Abdomen showed Right side obstructed femoral hernia with small bowel and omentum as contents, with retrograde dilatation of small bowel upto 3.8 cm in diameter; with associated lymphadenopathy in right iliac fossa region (Figure 2, 3a, 3b, 3c). An emergent inguinal exploration with Lotheissen trans-inguinal approach revealed an ischemic segment of anti-mesenteric segment of distal ileum strangulated at the right femoral canal (Figure 4a, 4b). The ischemic segment of the distal ileum/ jejunum was non-viable even after 100% oxygen administration and warm saline cover with no change of colour. Hence, proceeded with resection and anastomosis of the affected segment using 2-0 vicryl and 2-0 silk in 2 layers. Defect of the femoral canal was closed with 2-0 Prolene. Posterior wall fixed to the inguinal ligament with 2-0 vicryl. The patient had uneventful post-operative course and was discharged on 7$^{th}$ post-operative day. Histopathological reports were consistent with features of gangrenous intestine (segments of jejunum and ileum).

## II. DISCUSSION :

The earliest case of Richter's hernia was reported by Fabricius Hildanus in 1598, and the first scientific description of this hernia was provided by August Gottlob Richter in 1778. Richter's hernia, by definition, is a firm, small fascia defect. This orifice must be large enough to entrap the bowel wall but small enough to prevent protrusion from an entire loop. [1] In 1897, Sir Frederick Treves defined this condition as strangulation of only a part of the circumference of the intestine and accurately delineated the natural course of the hernia: "The involved segment may rapidly progress into gangrene while the bowel lumen remains patent." This type of hernias account for about 10% of all strangulated hernias. [2] The most common site is the femoral ring (36-88%), followed by the inguinal ring (12-36%), and the abdominal wall (4-25%). [1] Femoral hernias account for 3% of all groin hernias, and 46% of

International Journal Dental and Medical Sciences Research
Volume 3, Issue 2, Mar-Apr. 2021 pp 1105-1107 www.ijdmsrjournal.com ISSN: 2582-6018

femoral hernias result in strangulation. [4] Furthermore, of all strangulated femoral hernias, 6.3% are of Richter's type. [3] The segment of the entrapped bowel is nearly always the distal ileum, although any part of the gastrointestinal tract from the stomach to the colon may become incarcerated. The tendency for early strangulation and the common lack of obstructive symptoms may lead to delayed diagnosis and sometimes misdiagnosis, partly explaining the high mortality (20-60%) associated with Richter's hernia. The risk of ischaemia and necrosis of the incarcerated content increases with an increase in the preoperative delay, thus increasing the need for intestinal resection. This is, in turn associated with high morbidity and mortality rates. The type of surgical incision varies according to the location of Richter's hernia. For Richter's groin hernia, the favoured location is the preperitoneal space. This approach affords the surgeon excellent access to repair the hernial defect and to inspect the bowel through one incision.

## III. CONCLUSION :

Thus, the high death rate associated with Richter's hernia can be lowered through accurate diagnosis and early surgery. Thorough investigation of patient history and careful physical examination are required for accurate diagnoses. Radiological imaging is highly recommended in cases where Richter's hernia is suspected. Thus, successful management of Richter's hernia lies in early operative intervention. In conclusion, if a patient presents with unexplained signs of intestinal obstruction, then Richter's hernia is to be considered.

**Figure 1 :** Irreducible swelling in the right groin region with no cough impulse.

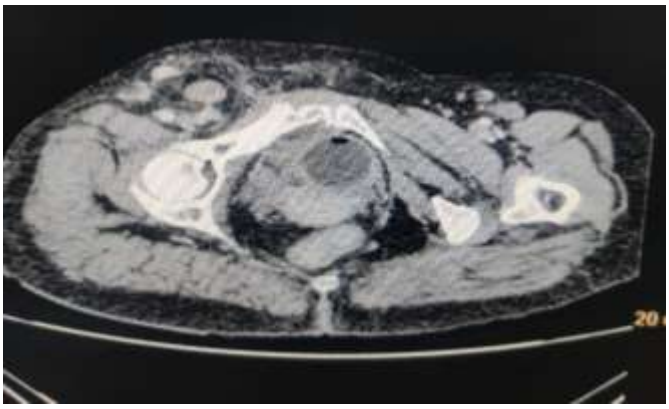

**Figure 2 :** CECT Abdomen showing right side obstructed femoral hernia with small bowel and omentum as contents.

International Journal Dental and Medical Sciences Research
Volume 3, Issue 2, Mar-Apr. 2021 pp 1105-1107 www.ijdmsrjournal.com ISSN: 2582-6018

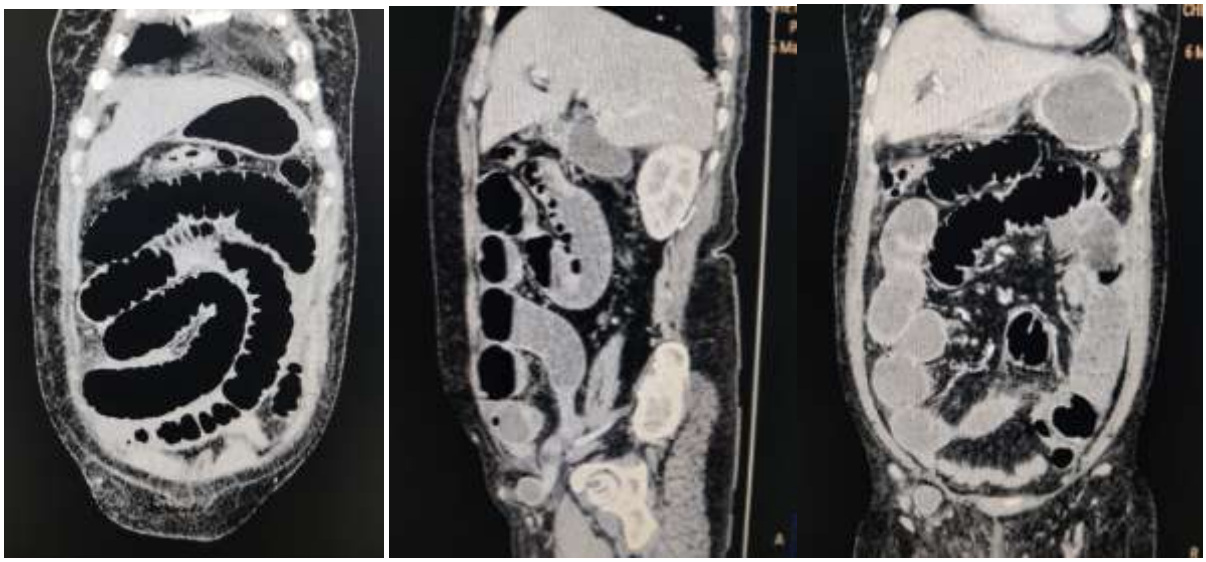

**Figure 3a; 3c :** Coronal sections showing dilated bowel loops. Figure 3b : Sagittal section.

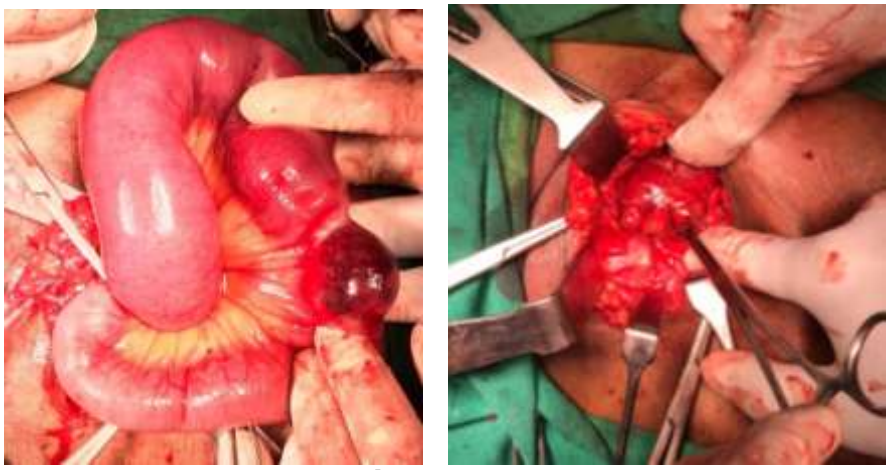

**Figure 4a; 4b :** Intraoperative images.

## REFERENCES :

[1]. Steinke W, Zellweger R. Richter's hernia and Sir Frederick Treves: an original clinical experience, review, and historical overview. Ann Surg. 2000;232:710e718.

[2]. Skandalakis PN, Zoras O, Skandalakis JE, Mirilas P. Richter hernia: surgical anatomy and technique of repair. Am Surg. 2006;72:180e184.

[3]. Mou CY, Lu HE, Yen SJ, Su CJ, Tan KH, Ku ZA. Richter's hernia: report of six cases. J Med Sci. 2000;20:201e206.

[4]. Hayden GE, Sprouse KL. Bowel obstruction and hernia. Emerg Med Clin North Am. 2011;29:319e345.