THE SURGEONS' LOUNGE CASE OPEN ACCESS

DOI: 10.5281/zenodo.4553285

A STRANGULATED FEMORAL HERNIA PRESENTING WITH BOWEL OBSTRUCTION

Amer Kamal Hussain, Gulsam Bashir*, Syed Shahmeer Raza**

Department of Urology, Our lady of Lourdes hospital, Drogheda, Co. Louth-Ireland, *Khyber Medial College Peshawar-Pakistan, **Visiting Rotating Student Cleveland Clinic-USA

The patient is a 76 years old female with past medical history significant for hypertension who presented to the Emergency Room of our Hospital with Small Bowel Obstruction associated with nausea, vomiting and persistent abdominal pain. The patient appeared to be in acute distress. There was some focal tenderness to palpation in the Right Groin with significant, non-reducible bulge. CT confirmed presence of femoral hernia with incarcerated bowel and associated bowel obstruction **Fig. 1** At this point the decision was made to take the patient to the Operating Room for concern of strangulated femoral hernia causing small bowel obstruction. The planned surgery was Femoral Hernia repair, possible Bowel Resection, possible mesh and possible laparotomy. Risks and benefits of the procedure was explained to the patient. The patient was taken to the Operating Room after Pre-Operative clearance for the procedure.

Keywords: Femoral Hernia; Obstruction; Open Repair

Citation: Hussain AK, Bashir G, Raza SS. A STRANGULATED FEMORAL HERNIA PRESENTING WITH BOWEL OBSTRUCTION. THE STETHO 2020;2(1):9-12

THE SURGEONS' LOUNGE CASE

Fig. 1 CT Abdomen shows Right Femoral Hernia with a loop of small bowel traversing through it acting as a transition point for the small bowel obstruction described. The following procedure was proposed Open repair strangulated femoral hernia and small bowel resection with single anastomosis.

A groin incision was made. Subcutaneous tissue and Scarpa's fascia were dissected by giving a right skin incision parallel to ilio-inguinal ligament. The external aponeurosis was incised, cord was identified and a Penrose drain passed around it. The cremaster is opened, the vasculature is identified and protected. An incarcerated femoral hernia was then identified. Sac was opened and evidence of strangulation and necrosis of small bowel could be seen. 10 cm of the necrotic bowel was excised and a side-to-side anastomosis of the bowel was done using GIA staplers. The anastomosis was further strengthened by 3-0 PDS sutures and good patency of anastomosis was confirmed. The mesenteric defect was closed with 2-0 silk and the bowel was reduced into abdominal cavity and the at this point sac was irrigated, due to the contamination a decision was made to proceed with a primary repair between the conjoined tendon and the Lacunar ligament medially, with a running O prolene suture. This was done all the way close to the femoral vein without occluding it. A transition stitch was given between Conjoined Tendon and shelving edge of inguinal ligament, uneventfully. The repair was solid. The patient also had umbilical hernia which was suture repaired in standard open fashion. The patient did not have any complication during or after the procedure.

1. **Can you comment on this case and tell us about the management of a strangulated Femoral hernia presenting with bowel obstruction?**
2. **What are the management options? What surgical approach do you think would be the best to opt?**

EXPERT COMMENTARY

ADIL HALEEM KHAN-MD (GENERAL SURGEON)

Femoral hernia are not commonly encountered hernias in clinic practice. They only account for about 5% of adult groin hernias. [1] However they are the most frequently incarcerated hernias and hence carry high morbidity and mortality. [2-4] These patients present with bulge in inguinal area. The bulge is inferior and lateral to Pubic tubercle, differentiating it from inguinal hernia where the bulge is superior and medial to pubic tubercle. However, this differentiation is not always very clear and definite diagnosis is only made during hernia repair. Frequently these hernias present with bowel obstruction due to incarceration of a loop of bowel and due to small hernial orifice, carrying a high risk of strangulation and bowel ischemia. [5]

Femoral hernias can be approached open or laparoscopically. Classically three open approaches have been described. These include infra-inguinal (Lockwood's), trans-inguinal (Lotheissen's) and High (McEvedy's) approach. Classically if Bowel strangulation is suspected, McEvedy's approach was utilized by many as it provides access to peritoneal cavity to assessment of bowel and subsequent resection and re-anastomosis as needed. An alternate single incision approach has been described in literature where a single incision is made 1 cm above the medial half of inguinal ligament and allows of any of the three approaches depending on operative findings. [6] Open femoral hernia as be repair primarily or with a mesh plug. Historically strangulated femoral hernias were repaired primarily in cases of bowel resection due to worry of contamination and subsequent mesh infection. However, this dictum has been challenged by findings of recent studies where mesh was utilized for repair even if bowel resection was performed. [7-9]

Laparoscopic transabdominal (TAPP) or total extra-peritoneal (TEP) approaches have been utilized more recently as surgical expertise in laparoscopic repair hernias has increased. [10-12] Studies have shown good operative times, decreased hospital stay as well as less wound infection with laparoscopic approaches. [13, 14]. Hernia can be repaired total extra-peritoneally with mesh after bowel is reduced by making a relaxing incision on lacunar ligament. Diagnostic laparoscopy can then be performed through a separate incision. Bowel can then be resected and

re-anastomosed with transabdominal approach as necessary.[15] Alternatively trans-abdominal approach can be utilized and hernia reduction, bowel resection anastomosis can be performed trans-abdominally and then mesh placed in the extra-peritoneal plane. Another approach described in the literature is that hernia is reduced, bowel resected and re-anastomosis performed and then hernia sac is inverted and tacked to abdominal wall to act as a patch to prevent immediate recurrence. Patient is allowed to recover and definitive repair can then be performed later in 4-6 weeks utilizing standard laparoscopic repair with mesh. [16]

In summary, femoral hernia is an uncommon clinic scenario that clinicians encounter in their clinic practice. Prompt diagnosis and repair is necessary to minimize morbidity and mortality. Both open and laparoscopic repair methods can be utilized depending on surgical expertise. Surgeons should consider placement of mesh even if bowel resection is performed with minimal contamination.

REFERENCES

1. Waddington, R.T., Femoral hernia: a recent appraisal. Br J Surg, 1971. 58(12): p. 920-2.
2. Chen, P., et al., Risk factors for bowel resection among patients with incarcerated groin hernias: A meta-analysis. Am J Emerg Med, 2020. 38(2): p. 376-383.
3. Gallegos, N.C., et al., Risk of strangulation in groin hernias. Br J Surg, 1991. 78(10): p. 1171-3.
4. Thomas, D., Strangulated femoral hernia. Med J Aust, 1967. 1(6): p. 258-61.
5. Ihedioha, U., et al., Hernias are the most common cause of strangulation in patients presenting with small bowel obstruction. Hernia, 2006. 10(4): p. 338-40.
6. Sorelli, P.G., N.S. El-Masry, and W.V. Garrett, Open femoral hernia repair: one skin incision for all. World J Emerg Surg, 2009. 4: p. 44.
7. Bessa, S.S., et al., Results of prosthetic mesh repair in the emergency management of the acutely incarcerated and/or strangulated groin hernias: a 10-year study. Hernia, 2015. 19(6): p. 909-14.
8. Topcu, O., et al., Polypropylene mesh repair of incarcerated and strangulated hernias: a prospective clinical study. Surg Today, 2013. 43(10): p. 1140-4.
9. Ueda, J., et al., Prosthetic repair of an incarcerated groin hernia with small intestinal resection. Surg Today, 2012. 42(4): p. 359-62.
10. Legnani, G.L., et al., Laparoscopic trans-peritoneal hernioplasty (TAPP) for the acute management of strangulated inguino-crural hernias: a report of nine cases. Hernia, 2008. 12(2): p. 185-8.
11. Leibl, B.J., et al., Laparoscopic transperitoneal hernia repair of incarcerated hernias: Is it feasible? Results of a prospective study. Surg Endosc, 2001. 15(10): p. 1179-83.
12. Mainik, F., R. Flade-Kuthe, and A. Kuthe, [Total extraperitoneal endoscopic hernioplasty (TEP) in the treatment of incarcerated and irreponible inguinal and femoral hernias]. Zentralbl Chir, 2005. 130(6): p. 550-3.
13. Deeba, S., et al., Laparoscopic approach to incarcerated and strangulated inguinal hernias. Jsls, 2009. 13(3): p. 327-31.
14. Yang, G.P., et al., Laparoscopic versus open repair for strangulated groin hernias: 188 cases over 4 years. Asian J Endosc Surg, 2012. 5(3): p. 131-7.
15. Kim, G., J.B. Yan So, and A. Shabbir, Totally extra-peritoneal repair for acute incarcerated femoral hernia with intestinal obstruction. Int J Surg Case Rep, 2017. 32: p. 16-18.
16. Sasaki, A., et al., Two-stage laparoscopic treatment for strangulated inguinal, femoral and obturator hernias: totally extraperitoneal repair followed by intestinal resection assisted by intraperitoneal laparoscopic exploration. Hernia, 2016. 20(3): p. 483-8.

Address for Correspondence:

Amer Kamal Hussain, Department of Urology, Our lady of Lourdes hospital, Drogheda, Co. Louth-Ireland
Cell: +353-89-9672961
Email: amerkamalhussain1@gmail.com