International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: 6.614
Available Online at www.journalijcar.org
Volume 7; Issue 7(B); July 2018; Page No. 14009-1410
DOI: http://dx.doi.org/10.24327/ijcar.2018.1410.2523

Research Article

ROLE OF PARTIAL RELEASE OF THE INGUINAL LIGAMENT IN EMERGENCY FEMORAL HERNIA REPAIR

Dileep Ramesh Hoysal*., Anil Kumar K N., Madan Mariyappa and Manoj Karthik S

Department of Surgery, BGS Global Institute of Medical Sciences, Bangalore-560060

A R T I C L E I N F O

Article History:

Received 16th April, 2018
Received in revised form 4th May, 2018 Accepted 12th June, 2018
Published online 28th July, 2018

Key words:

Emergency Hernia Repair, Femoral hernia, Femoral hernia repair, Groin hernia, Strangulated hernia

A B S T R A C T

Groin hernias are one of the most common surgical problems presenting to the outpatient clinic. Emergency presentation of these groin hernias are uncommon and are less than 5%, Though femoral hernia being the least frequent groin hernia, has the highest incidence of 36% in presenting as a complicated hernia. Emergency femoral hernia repair has been a topic of academic interest since decades. Classically Lockwood infrainguinal, Lotheissen transinguinal and McEvedy high inguinal approaches have been described. In all of these approaches the importance of mobilisation of inguinal ligament is hardly highlighted in the literature. Here we describe and emphasize the role of partial release of inguinal ligament in emergency femoral hernia repair which is a safer option and aids in adequate evaluation and reduction of contents with minimal local complications and obviating the need of laparotomy in cases with a narrow femoral defect and minimizes the chance of bowel injury during reduction.

INTRODUCTION

Groin hernias presenting as a complicated hernia is documented to be around <5%. Femoral hernia which accounts for 2-4% of all groin hernias has the highest incidence of presenting as a complicated hernia amounting up to 36% cases of all the femoral hernias [1]. Classically infrainguinal, transinguinal and high inguinal approaches have been described in the management of emergency repair of these hernias [2]. Laparotomy is a well documented and a versatile option in cases with nonviable contents and difficult reduction of hernia contents. Here we present and emphasize the role of mobilization of inguinal ligament in the management of emergency femoral hernia repairs.

Point of Technique - Case

A 55 yr old female patient came to the casualty with c/o painful swelling in the right groin since 3 hours associated with 2 episodes of vomiting. On examination, tender right femoral hernia with absent cough impulse was noted. Diagnosis of obstructed femoral hernia was established. An emergency sonographic assessment was done to note the vascularity of the hernial contents and contents were found to be viable. Hence an inguinal exploration was planned.

Intraoperatively edematous bowel with venous congestion was noted.

Corresponding author:* **Dileep Ramesh Hoysal
Department of Surgery, BGS Global Institute of Medical Sciences, Bangalore-560060

Femoral ring was narrow and plugged with edematous bowel loops which increased the difficulty of dissection. We released the constricting neck medially to release lacunar ligament but incising lacunar ligament hardly made any difference to the size of the defect. Lateral dissection was highly unsafe due to the presence of femoral vein hence was not carried out. The option left to us was doing a formal laparotomy and reduction of bowel which had a high risk of bowel injury and resection anastomosis. On table we decided to manipulate the inguinal ligament by doing partial release of inguinal ligament for a length of 1cm about 1.5x1.5 cm above and medial to the femoral vein. This was found to be useful and we could release the constricting ring which allowed in the recovery of the bowel. Recovered bowel was reduced intact. Cooper ligament repair was performed with interrupted nonabsorbable monofilament sutures [Fig 1].

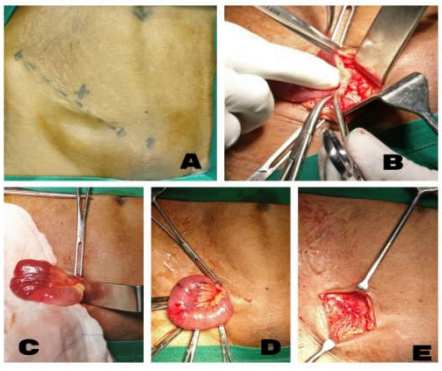

Fig 1 (A-E) A Femoral hernia on presentation, B: Inguinal ligament release, C: Congested bowel, D: Recovered bowel, E: Cooper ligament repair.

Postoperative period was uneventful. Patient was started on oral diet after 48hrs and Patient recovered well. Patient is on regular follow up once in three months. No recurrence is noted till date.

DISCUSSION

Femoral hernia is an uncommon entity largely noticed in the female population. Presenting as a complicated hernia in 36% of cases is one of the commoner presentations of femoral hernia either in the form of irreducibility, obstruction or as strangulated. Most frequent one is irreducibility followed by obstruction and strangulation subsequently [1,3].

Though 3 classical approaches are described [Fig 2], approach to emergency repair of complicated femoral hernia is dictated by the mode of its presentation. Reduction of the sac from femoral ring after appropriately evaluating the viability of contents of the hernia is the key step in femoral hernia repair in all these approaches. Small ring and large sac makes it extremely difficult in reducing the sac, incision of the lacunar (Gibernat's) ligament medial to the femoral ring has been extensively described in the literature. In fact, though in practice an attempt to divide lacunar ligament should be discouraged as an aberrant obturator artery is present in the edge of lacunar ligament in more than 30% cases [4]. Lateral dissection is highly unsafe and ill advised due to the presence of femoral vein.

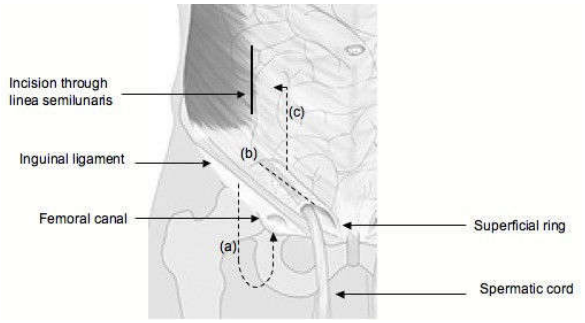

Fig 2 Classical approaches for femoral hernia repair a: infrainguinal, b: transinguinal c: high inguinal.

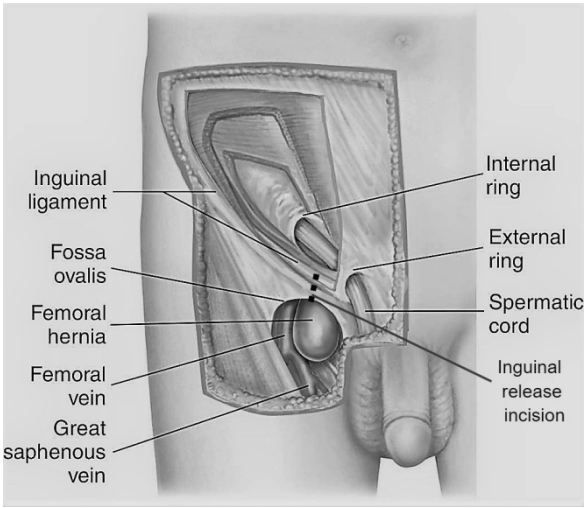

Fig 3 Showing partial release incision of inguinal ligament

In cases with difficult reduction of sac we would like to suggest a small yet significant technique before going ahead with a formal laparotomy and we do not presume to be the first to do this technique however this technique is rarely described in the literature in the treatment of femoral hernia. Mobilisation of Inguinal ligament by doing partial division of inguinal ligament for a length of 1cm about 1.5x1.5 cm above and medial to the femoral vein will aid in widening the defect and helps in adequate evaluation, recovery and reduction of contents of a huge sac.

Laparotomy is still the gold standard in the management of a strangulated femoral hernia which needs extensive bowel resection and anastomosis [5]. However strangulated femoral hernias usually have a short segment bowel involvement and can be managed in the aforementioned approaches. Mobilization of inguinal ligament by partial release adds on to these inguinal approaches and may help in avoiding the need of a laparotomy in cases with narrow defect and irreducible contents of the sac.

CONCLUSION

Femoral hernia usually presents as a complicated hernia to the emergency room. Emergency femoral hernia repair poses a surgical challenge in terms of choice of appropriate approach, small defect and plugging of contents makes it even more difficult for dissection, mobilization of the inguinal ligament by partial release aids in adequate evaluation and reduction of contents with minimal local complications. We would like to recommend this technique in cases with a narrow femoral defect and short segment irreducible contents. This also helps in obviating the need of a laparotomy in certain cases and minimizes the chances of bowel injury during reduction.

References

1. Dahlstrand U, Wollert S, Nordin P, Sandblom G, Gunnarsson U (2009) Emergency femoral hernia repair. A study based on a national register. *Ann Surg* 249:672-6.
2. Alimoglu O, Kaya B, Okan I, Dasiran F, Guzey D, Bas G, Sahin. MA (2006) Femoral hernia: a review of 83 cases. *Hernia* 10:70–73.
3. Kadirov S, Sayfan J, Friedman S, Orda R (1996) Richter's hernia – a surgical pitfall. *J Am Coll Surg* 182:60–62.
4. Rogers FA (1959) Strangulated femoral hernia: a review of 170 cases. *Ann Surg* 149(1):9-20.
5. Kurt N, Oncel M, Ozkan Z, Bingul S (2003) Risk and outcome of bowel resection in patients with incarcerated groin hernias: retrospective study. *World J Surg* 27(6):741-3.

****