e-ISSN: 0976-822X, p-ISSN:2961-6042

Available online on http://www.ijcpr.com/

International Journal of Current Pharmaceutical Review and Research 2024; 16(3); 276-280

Original Research Article

A Study to Evaluate the Clinical Spectrum and Outcomes of the Patient with Inguinal Hernia

Murari Kumar[1], Kunal Kumar[2]

[1]Senior Resident, Department of General Surgery, Patna Medical College and Hospital Patna, Bihar, India

[2]Senior Resident, Department of General Surgery, Patna Medical College and Hospital Patna, Bihar, India

Received: 03-02-2024 / Revised: 08-03-2024 / Accepted: 20-03-2024
Corresponding Author: Dr. Kunal Kumar
Conflict of interest: Nil

Abstract

Aim: The aim of the present study was to evaluate the clinical presentation, management and outcomes of the patient with inguinal hernia.

Methods: The present study was conducted in the Department of General Surgery, Patna Medical College and Hospital Patna, Bihar, India. 50 patients were included in the study.

Results: Most of the patients belonged to 21-40 years and there were male predominance. In this study we found that a higher incidence of inguinal hernia on right side 60%, 30% hernia left sided and 8% were bilateral congenital inguinal hernia. In this study, 84% cases had indirect inguinal hernia and 16% cases had direct inguinal hernia. 56% had bowel content. In this study, hernioplasty (58%) was the common operative procedure used to manage the cases followed by herniorrhaphy (28%), stoppa's procedure (6%), reduction with herniorrhaphy (4%) and resection and anastomosis with hernioplasty (4%). In this study, post-operative complications were very minimal i.e. wound infections (4%), groin pain (4%), hematoma (2%), scrotal swelling (2%) and recurrence (2%).

Conclusion: The incidence of inguinal hernia was most common in the age group of 21-40 years. The hernioplasty (58%) was the preferable surgical option in the management of hernia. Increasing awareness in general population may help in detect at earlier stage and will reduce the disease morbidity.

Keywords: clinical presentation, management, outcomes, inguinal hernia

Introduction

Hernia is a general term describing a bulge or protrusion of an organ or tissue through an abnormal opening within the anatomic structure. Although there are many different types of hernias, they are usually related to the abdomen, with approximately 75% of all hernias occurring in the inguinal region. [1]

Use of higher resolution axial computed tomography in the diagnosis of inguinal hernia is being investigated. [2] Magnetic resonance imaging may be useful in differentiating inguinal and femoral hernias with a high sensitivity and specificity (greater than 95%). [3] The use of magnetic resonance imaging is helpful in the diagnosis of athletic pubalgia or sports hernias, which may occur at any age with potentially more than one cause. The physician may consider magnetic resonance imaging in the workup of patients with activity-related groin pain when no inguinal hernia can be identified on physical examination. [4]

In the past, surgical repair was recommended for all inguinal hernias because of the risk of complications such as incarceration or strangulation. However, recent studies have proved that small, minimally symptomatic, first occurrence hernias do not necessarily require repair, and these patients can be followed expectantly. However, they should be counseled on the symptoms of incarceration and strangulation, and to seek prompt evaluation if these occur. [5,6] Patients with symptomatic, large, or recurrent hernias should be referred for repair, generally within one month of detection. [7] Hernia repair almost always involves some type of prosthetic material (i.e., mesh), with the possible exception of women of childbearing age because stretching of tissues during pregnancy may result in a recurrent hernia. The choice of mesh material used in the repair is based on the surgeon's preference.

The choice of open vs. laparoscopic repair depends on surgeon preference, but only about 10 percent of inguinal hernia repairs in the United States are

performed via a laparoscopic technique. [8] Open repair may be particularly beneficial in older, less healthy patients. [9] Laparoscopic repair is usually reserved for recurrent or bilateral hernias.

The aim of the present study was to evaluate the clinical presentation, management and outcomes of the patient with inguinal hernia.

Materials and Methods

The present study was conducted in the Department of General Surgery, Patna Medical College and Hospital Patna, Bihar, India for one year . 50 patients were included in the study.

Inclusion Criteria:

All the subjects with age between 18 years and 60 years, belonging to both sexes were included in the study. The study was conducted on the basis of all the patients admitted in ward as elective cases from outpatient department.

Exclusion Criteria:

Patients presenting with acute scrotal conditions like incarcerated hernia, strangulated hernia and obstructed hernia were excluded from the study.

Study Procedure:

All patients underwent through clinical examinations and were evaluated for systemic diseases. All patients were admitted one day prior to surgery. All relevant investigations were done for all the patients including haemoglobin, urine examinations and preoperative anaesthesia evaluation. Nature of hernia and method of surgery was explained to their parents in their languages. Nil orally 6 hours prior to surgery was advised. Diagnosis was based on history of scrotal swelling, intermittent bulge, swelling on examinations, palpations along inguinal canal, and occasionally it was an incidental finding on ultrasonography. Preoperative xylocaine sensitivity test was done. Written and informed consent of both parents was taken after giving information procedure and possible complications in their own language. Preoperative antibiotics were given half an hour prior to surgery. Anaesthesia used was general anaesthesia, spinal anaesthesia or caudal block.

Patients were taken on table for operation in supine position. Under all aseptic precautions, painting and draping was done. Anterior superior iliac spine and pubic tubercle were marked out. 2 finger breadth upward and laterally skin crease incision was taken approximately 1-1.5 cm. External oblique aponeurosis was identified an incision taken over external oblique aponeurosis and extended medially as well as laterally along the fibres of aponeurosis. Superficial ring was not disturbed al all, two folds of external oblique aponeurosis, cord structure hooked without disturbing neighbouring structures. Longitudinal incision was taken over cremestric tube and opened; pearly white sac was visualized easily on superiomedial aspect of spermatic cord. Sac was identified properly, sac only held and rest of structures reduced inside. Then sac was separated from cord structure without disturbing, pampiniform plexus and testicular vessels. Sac was separated up to deep ring and patency of processus vaginalis was confirmed. Then Trans fixation of the sac as high as possible towards the deep ring, high ligation of sac was done. After high ligation of sac, Ligated stump of retracted into abdominal cavity and haemostasis achieved. One to two sutures were taken over external oblique aponeurosis to approximate opened folds with vicryl 3-0 RB. Skin was closed with subcuticular vicryl 3-0. Dressing was applied. After surgery, all patients transferred to surgery ward. In the postoperative period, patient was kept nil by mouth for at least 4-6 hours.

Early ambulation was done. Most of the patients were discharge on next day of operation. Inspection of surrounding area was done on discharge. Patient reviewed after 3-5 days in OPD. At review, complaints of patients were asked and operative site was examined. Inspection of surrounding area was done and specifically looked for scrotal oedema, seroma formation, wound infection. Stitch removal was done after 8 days or according to status of wound and age. The follow up period in our study rose from three months to one year. No recurrence was reported during this period.

Statistical Analysis:

The data was entered into Microsoft excel and analyzed using SPSS version 20 to compute the frequency and percentages.

Results

Table 1: Age and Sex Distribution of the patients

Parameter	No. of patients	Percentage
Age (Years)		
Less than 20 years	4	8
21-40 years	27	54
41-60 years	19	36
Gender		
Male	42	84
Female	8	16

Side of hernia		
Right sided	30	60
Left Sided	16	32
Bilateral	4	8
Content of hernia		
Bowel	28	56
Omentum	22	44
Type of hernia		
Direct	8	16
Indirect	42	84

Most of the patients belonged to 21-40 years and there were male predominance. In this study we found that a higher incidence of inguinal hernia on right side 60%, 30% hernia left sided and 8% were bilateral congenital inguinal hernia. In this study, 84% cases had indirect inguinal hernia and 16% cases had direct inguinal hernia. 56% had bowel content.

Table 2: Management

Management	N	%
Herniorrhaphy	14	28
Hernioplasty	29	58
Reduction and herniorrhaphy	2	4
Resection and anastomosis with Herniorrhaphy	2	4
Stoppa's procedure	3	6

In this study, hernioplasty (58%) was the common operative procedure used to manage the cases followed by herniorrhaphy (28%), stoppa's procedure (6%), reduction with herniorrhaphy (4%) and resection and anastomosis with hernioplasty (4%).

Table 3: Post-operative complications

Complications	Frequency	Percentage
Wound Infections	2	4
Groin Pain	2	4
Hematoma	1	2
Scrotal Swelling	1	2
Recurrence	1	2

In this study, post-operative complications were very minimal i.e. wound infections (4%), groin pain (4%), hematoma (2%), scrotal swelling (2%) and recurrence (2%).

Discussion

Inguinal hernia is the familiar reason a primary care patient may need referral for surgical intervention. Hernia is termed as a protrusion of a tissue or organ through an abnormal opening within the anatomic structure. [10] The inguinal hernias account approximately 75% of all abdominal hernias worldwide. The incidence of inguinal hernias was in people of 5th decade with male dominance. [11] Inguinal hernia repair accounts 10-15% of all general surgical procedures take place in global context. [12] The annual incidence of inguinal hernia is 19, 57,850 in India. [13] The management of inguinal hernia depends upon the duration and type of presentation. Delay in the treatment may leads to visceral organ strangulation with additional risks of gangrene, perforation, and infection of the peritoneal cavity. The higher rate of morbidity and mortality was reported in developing countries due to delay in report, lack of modern surgical facilities and delay in treatment. [14] Early diagnosis and elective repair is a safe and effective strategy for patients of all ages that avoid incarceration, strangulation and their complications. [15]

Most of the patients belonged to 21-40 years and there were male predominance. A study by Singh S et al [16] included 51.85% cases between 45-64 years age group, 31.48% cases between 15-44 years and 16.67% cases above 65 years. A study by Pulin Ch Kumar and Paul Pratik reported out of 50 hernia cases, majority cases were fall under the age group 50-60 years (30%) and very less number below 20 years. [17] In this study we found that a higher incidence of inguinal hernia on right side 60%, 30% hernia left sided and 8% were bilateral congenital inguinal hernia. Grosfeld et al [18] reported an

incidence of 55%-60% of the inguinal hernias on the right side, that of 25% on the left side and that of 15% bilaterally. A study by Ravikumar V et al [19] reported right sided hernias in 54% cases and left side hernias in 42% cases. In this study, 84% cases had indirect inguinal hernia and 16% cases had direct inguinal hernia. 56% had bowel content. A study by Prakash S et al [20] reported that the content of the hernia sac was small bowel in 74.3% and omentum in 25.7% cases. The result of present study was in consistent with above studies where more number of cases had hernia content as bowel.

In this study, hernioplasty (58%) was the common operative procedure used to manage the cases followed by herniorrhaphy (28%), stoppa's procedure (6%), reduction with herniorrhaphy (4%) and resection and anastomosis with hernioplasty (4%). A study by Pulin Ch Kumar and Paul Pratik reported various operative procedure to manage inguinal hernia i.e. reduction and hernioplasty in 56% cases, omentectomy and herniorrhaphy in 6% cases, resection of bowel with hernioplasty in 32% cases, resection of bowel with stoma formation with herniorrhaphy in 4%, appendectomy with herniorrhaphy in 2% cases. In this study, post-operative complications were very minimal i.e. wound infections (4%), groin pain (4%), hematoma (2%), scrotal swelling (2%) and recurrence (2%). A study by Primatesta P et al [13], found postoperative complication rate was only 4.92%.

Conclusion

The incidence of inguinal hernia was most common in the age group of 21-40 years. The hernioplasty (58%) was the preferable surgical option in the management of hernia. Increasing awareness in general population may help in detect at earlier stage and will reduce the disease morbidity.

References

1. Evers BM. Small bowel. In: Sabiston DC, Townsend CM, eds. Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice. 18th ed. Philadelphia, Pa.: Saunders/Elsevier; 2008:873-916.
2. Burkhardt JH, Arshanskiy Y, Munson JL, Scholz FJ. Diagnosis of inguinal region hernias with axial CT: the lateral crescent sign and other key findings. Radiographics. 2011 Mar; 31(2):E1-2.
3. VAN DEN BERG JC, DE VALOIS JC, Go PM, Rosenbusch G. Detection of groin hernia with physical examination, ultrasound, and MRI compared with laparoscopic findings. Investigative radiology. 1999 Dec 1;34(12):7 39.
4. Zoga AC, Mullens FE, Meyers WC. The spectrum of MR imaging in athletic pubalgia. Radiologic Clinics. 2010 Nov 1;48(6):1179-9 7.
5. Fitzgibbons RJ Jr, Giobbie-Hurder A, Gibbs JO, et al. Watchful waiting vs repair of inguinal hernia in minimally symptomatic men: a randomized clinical trial [published correction appears in JAMA. 2006;295(23): 2726]. JAMA. 2006;295(3):285-292.
6. Turaga K, Fitzgibbons RJ Jr, Puri V. Inguinal hernias: should we repair? Surg Clin North Am. 2008;88(1):127-138, ix.
7. National Guideline Clearinghouse. Hernia.
8. Mahon D, Decadt B, Rhodes M. Prospective randomized trial of laparoscopic (transabdominal preperitoneal) vs open (mesh) repair for bilateral and recurrent inguinal hernia. Surg Endosc. 2003;17(9):1386-1390.
9. Neumayer L, Giobbie-Hurder A, Jonasson O, et al.; Veterans Affairs Cooperative Studies Program 456 Investigators. Open mesh versus laparoscopic mesh repair of inguinal hernia. N Engl J Med. 2004;350(18):1819-1827.
10. Kim Edward Leblanc, Leanne Leblanc L, Karl Leblanc A. Inguinal Hernias: Diagnosis and Management. American Family Physician 201 3;002087(12):844-848.
11. McIntosh A, Hutchinson A, Roberts A, Withers H. Evidence-based management of groin hernia in primary care - A systematic review. Fam Pract 2000;17(5):442-447.
12. Mabula JB, Chalya PL. Surgical management of inguinal hernias at Bugando Medical Centre in North western Tanzania: Our experiences in a resource-limited setting. BMC Res Notes 2012;5:585.
13. Primatesta P, Goldacre MJ. Inguinal hernia repair: Incidence of elective and emergency surgery, readmission and mortality. Int J Epidemiol 1996;25:835-9.
14. Rao SS, Singh P, Gupta D, Narang R. Clinicoepidemiologic profile of inguinal hernia in rural medical college in central India. J Mahatma Gandhi Inst Med Sci 2016;21(2):11 6-121.
15. Bali C, Tsironis A, Zikos N, Mouselimi M, Katsamakis N. An unusual case of a strangulated right inguinal hernia containing the sigmoid colon. Int J Surg Case Rep 2011; 2(4):53-5.
16. Singh S, Prakash R, Singh V. A clinical study of inguinal hernia with special reference to laparoscopic trans- abdominal pre peritoneal repair. Int Surg J 2017;4:282-90.
17. Pulin Kumar CH, Paul Pratik. A Clinical Study of Complicated Inguinal Hernia with Special Reference to Its Management. Medico-legal Update 2020;20(3):279-283.
18. Grosfeld et al. Inguinal hernia in children – the factors which affected the recurrence in 62 cases. Journal of Paed Surgery 1991, 265-83.
19. Ravikumar V, Rajshankar S, Hareesh RS Kumar, Nagendra Gowda MR. A Clinical Study

on the Management of Inguinal Hernias in Children on the General Surgical Practice. Journal of Clinical and Diagnostic Research 2013;7(1):144-147.

20. Prakash S, Samraj A, Muthukumaran G. A study on groin hernias presenting as acute surgical emergencies in adults. International Surgery Journal 2017;4(12):3866-3872.