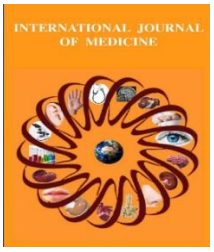

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Original Research

Clinical Profile and Outcomes of Inguinal Hernia Repair in a Tertiary Care Center

Dr. Sanikommu Srinivas Reddy
Associate Professor, Department of General Surgery, Indian Institute of Medical Science & Research.

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Abstract
Background Inguinal hernia is one of the most common surgical conditions encountered worldwide and represents a significant proportion of general surgical procedures. Surgical repair remains the definitive treatment, with techniques evolving from tissue repair to mesh-based tension-free methods. Evaluating the clinical profile and outcomes of inguinal hernia repair helps improv e patient care and surgical planning. Objective: To study the clinical profile, risk factors, surgical management, and postoperative outcomes of patients undergoing inguinal hernia repair in a tertiary care center. Materials and Methods: A prospective observational study was conducted among 120 patients diagnosed with inguinal hernia and treated surgically at a tertiary care hospital over a period of 18 months. Demographic data, clinical presentation, risk factors, type of hernia, surgical technique used, and postoperative complications were recorded. Data were analyzed using descriptive statistics. Results: The majority of patients were males (94.2%) with the most affected age group being 41-60 years. Right-sided inguinal hernia was more common (55%). Indirect inguinal hernia was the predominant type (63.3%). Lichtenstein tension-free mesh repair was performed in most cases (72.5%). Postoperative complications included surgical site infection (5%), seroma formation (4.2%), and recurrence (1.7%). Conclusion: Inguinal hernia predominantly affects middle-aged males. Tension-free mesh repair remains the most widely performed and effective surgical technique with low recurrence and complication rates.

Keywords: *Inguinal hernia, Risk factors, surgical management, Postoperative outcomes of patients.*

Introduction

Inguinal hernia is defined as the protrusion of abdominal contents through a weakness in the inguinal region of the abdominal wall. It is one of the most frequently encountered surgical conditions, accounting for nearly 75% of all abdominal wall hernias. The lifetime risk of developing an inguinal hernia is estimated to be about 27% in men and 3% in women.

Several factors contribute to the development of inguinal hernia, including increased intra -abdominal pressure, connective tissue disorders, chronic cough, constipation, heavy lifting, and aging. Clinically, patients typically present with a groin swelling that may be associated with pain or discomfort.

Surgical repair is the only definitive treatment for inguinal hernia. Various techniques are used, including open tissue repair, tension -free mesh repair, and laparoscopic approaches. Among these, the Lichtenstein tension-free mesh repair has become the most widely practiced technique due to its simplicity and low recurrence rates.

Understanding the clinical profile and outcomes of patients undergoing inguinal hernia repair helps surgeons identify risk factors, optimize treatment strategies, and reduce postoperative complications.

Therefore, the present study was conducted to evaluate the clinical characteristics and outcomes of inguinal hernia repair in patients treated at a tertiary care center.

Address for Correspondence Dr. Sanikommu Srinivas Reddy , Associate Professor, Department of General Surgery, Indian Institute of Medical Science & Research Institute of Medical Sciences.

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Materials and Methods

This is a Prospective observational study was conducted in the Department of General Surgery at a tertiary care teaching hospital over a 18 months.

Study Population

All patients diagnosed with inguinal hernia and admitted for surgical repair during the study period were included.

Sample Size

A total of 120 patients were included in the study.

Inclusion Criteria

- Patients aged above 18 years
- Patients diagnosed with inguinal hernia
- Patients who underwent surgical repair

Exclusion Criteria

- Patients with recurrent hernia undergoing reoperation elsewhere
- Patients unfit for surgery
- Patients who refused consent

Data Collection

Information was collected using a structured proforma including:

- Age
- Gender
- Occupation
- Clinical symptoms
- Type and side of hernia
- Risk factors
- Type of surgical procedure
- Postoperative complications

Statistical Analysis

Data were entered into Microsoft Excel and analyzed using descriptive statistics. Results were expressed as frequencies and percentages.

Results

Table 1: Age Distribution of Patients

Age Group (Years)	Number of Patients	Percentage
18-30	18	15%
31-40	24	20%
41-50	32	26.7%
51-60	28	23.3%
>60	18	15%
Total	**120**	**100%**

Table 2: Gender Distribution

Gender	Number of Patients	Percentage
Male	113	94.2%
Female	7	5.8%
Total	**120**	**100%**

Table 3: Type of Inguinal Hernia

Type of Hernia	Number	Percentage
Indirect	76	63.3%
Direct	38	31.7%
Pantaloon	6	5%
Total	**120**	**100%**

Table 4: Side of Hernia

Side	Number	Percentage
Right	66	55%
Left	42	35%
Bilateral	12	10%
Total	**120**	**100%**

Table 5: Postoperative Complications

Complication	Number	Percentage
Surgical Site Infection	6	5%
Seroma	5	4.2%
Hematoma	3	2.5%
Recurrence	2	1.7%
No Complications	104	86.6%

Discussion

The present study evaluated the clinical profile and outcomes of inguinal hernia repair in a tertiary care center. The findings showed that inguinal hernia was more common in males, accounting for more than 90% of cases. This male predominance is consistent with previous studies and is attributed to anatomical differences such as the presence of the spermatic cord and weakness in the inguinal canal.

The most affected age group in the present study was 41-60 years, which is similar to findings reported in earlier studies. Aging leads to weakening of abdominal wall muscles, increasing the likelihood of hernia formation. Indirect inguinal hernia was the most common type

observed in this study. This is consistent with the literature, which reports that indirect hernias account for the majority of cases due to congenital weakness of the deep inguinal ring. Regarding surgical management, Lichtenstein tension-free mesh repair was the most commonly performed procedure. This technique has gained wide acceptance due to its low recurrence rate and simplicity.

Postoperative complications were relatively low in this study. Surgical site infection and seroma formatio n were the most common complications. Recurrence occurred in only a small percentage of cases, highlighting the effectiveness of mesh repair techniques.

Overall, the outcomes of inguinal hernia repair in this tertiary care center were favorable and comparable with findings reported in previous surgical studies.

Conclusion

Inguinal hernia is a common surgical condition that predominantly affects middle-aged males. Indirect inguinal hernia is the most frequent type encountered. Tension-free mesh repair, particularly the Lichtenstein technique, remains the most commonly performed procedure with excellent outcomes and minimal recurrence rates.

Early diagnosis and timely surgical intervention help reduce complications and improve patient outcomes.

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