

## Inguinal Hernia Among Patients Admitted in Tertiary Care Hospital, North Lakhimpur, Assam: A Descriptive Cross Sectional Study

Dr. Ishankur Saikia<sup>1</sup>, Dr. Bapdhan Dehingia<sup>2</sup>, Dr. Jitu Deka<sup>2</sup>, Dr. Anindya Baruah<sup>2</sup>, Dr. Diganta Bora<sup>3</sup>

<sup>1</sup> Assistant Professor, Department of Surgery, Lakhimpur Medical College and Hospital, North Lakhimpur, Assam.

<sup>2</sup> Assistant Professor, Department of Anaesthesiology, Lakhimpur Medical College and Hospital, North Lakhimpur, Assam.

<sup>3</sup> Associate Professor, Department of Anaesthesiology, Lakhimpur Medical College and Hospital, North Lakhimpur, Assam.

### OPEN ACCESS

\*Corresponding Author:

**Dr. Diganta Bora**  
Associate Professor,  
Department of  
Anaesthesiology, Lakhimpur  
Medical College and Hospital,  
North Lakhimpur, Assam.

Received: 09-06-2025

Accepted: 22-07-2025

Available Online: 13-08-2025



©Copyright: IJMPR Journal

### ABSTRACT

**Background:** Abdominal wall hernia is one most common surgical conditions encountered in medical departments. Inguinal hernia is the most common among abdominal hernias. The definitive treatment being surgical repair of the herniation. In our study we tried to find out the burden of inguinal hernias in patients in Lakhimpur Medical College and Hospital, a peripheral tertiary Medical college in Assam.

**Aim:** Our aim is to find out the prevalence of inguinal hernia among patients admitted in the Department of General surgery, Lakhimpur Medical College and Hospital, North Lakhimpur.

**Methods:** Our study is single centric, retrospective, observational study. After obtaining approval from Institutional Ethical Committee, data was collected from medical records department of Lakhimpur Medical College and Hospital, North Lakhimpur. Data was collected for a period of 24 months, i.e from 1st January 2022 to 31st December 2023. The demographic profile with respect to age and sex, and the type of hernia was recorded.

**Results:** The total number of patients admitted in surgical ward was 5742 and the total number of abdominal hernia admitted in the hospital was found to be 138 (2.4%). The number of inguinal hernias was 125 (2.17%), umbilical hernia 9 (0.15%), epigastric hernia 3 (0.05%), and femoral hernia 1

(0.01%). Among the inguinal hernia patients (125 nos), 120 (96%) were males and 5 (4%) were females. Males were mostly from 51-60 age group and females from 21-30s. 81 (64.8%) patients suffered from right sided inguinal hernias, 39 (31.2%) from left sided and 5 (4%) from bilateral hernias. Out of which 92 (73.6%) were found to be indirect and 33 (26.4%) to be direct inguinal hernias.

**Keywords:** Abdominal wall hernia; Inguinal hernia; Prevalence; Retrospective observational study

### INTRODUCTION

Hernia is defined as the protrusion of the contents through a preformed or secondarily established hiatus, mostly in the abdominal wall<sup>1</sup>. The abdominal wall hernia prevalence worldwide is 1.7 %<sup>2</sup>. Inguinal hernias account for 75% of abdominal wall hernias with a lifetime risk of 27% in men and 3% in women.<sup>2</sup>

Any underlying weakness in abdominal wall along with physical exertion, heavy weight lifting, strenuous exercises, chronic constipation, previous abdominal surgery, altered metabolism of collagen connective tissue and extracellular matrix can also lead to increased intra abdominal pressure and thus herniation<sup>5,6,7</sup>.

The commonest symptom of hernia is discomfort or pain, many hernias may cause no pain but only swelling in the groin. Hernias are defined as reducible if the contents can be replaced spontaneously or with manual pressure into the cavity and irreducible if contents cannot be replaced. Irreducible hernias can be incarcerated due to small hernia neck<sup>3</sup>, and the contents protruding are viable and not causing obstruction or inflammation<sup>8</sup>. If the hernia contents obstructs the lumen of the bowel, features of intestinal obstruction may appear, depending on partial or complete obstruction. When the blood supply is compromised causing ischemia and necrosis, it is termed as irreducible strangulated hernia, which is considered a surgical emergency<sup>4</sup>.

The types of hernia according to location can be – Inguinal- if the abdominal contents protrude into the inguinal canal, femoral- if into the femoral canal, incisional –if occurring in scar tissue from previously made surgical incisions, umbilical hernia - if occurring near the naval area (umbilicus) and epigastric hernia - if it appears between the xiphisternum and umbilicus. Other less common types are diaphragmatic, lumbar and spigelian.

If the hernia is present since birth, mainly due to persistent opening of the processus vaginalis, it is called congenital and acquired if developed later in life.

Inguinal hernias can also be direct or indirect. If the abdominal contents directly pushes through the posterior abdominal wall, it is called direct. Whereas, if, the contents protrude through the internal inguinal ring and into the inguinal canal, it is called indirect. Further hernias can be complete or partial, primary or recurrent in nature.

The main treatment of hernia is surgical repair of the defect in the abdominal wall. The surgical procedures include herniotomy (removal of the hernia sac only), herniorraphy (herniotomy plus repair of the posterior wall of the inguinal canal), hernioplasty (herniotomy plus reinforcement of the posterior wall of the inguinal canal with a synthetic mesh)

### **AIM**

Our aim is to find out the prevalence of Inguinal hernia among patients admitted in Department of general surgery in Lakhimpur Medical College and Hospital, North Lakhimpur.

### **OBJECTIVES**

To evaluate the prevalence of Inguinal Hernia in patients admitted in Department of general surgery in Lakhimpur Medical College and Hospital, North Lakhimpur.

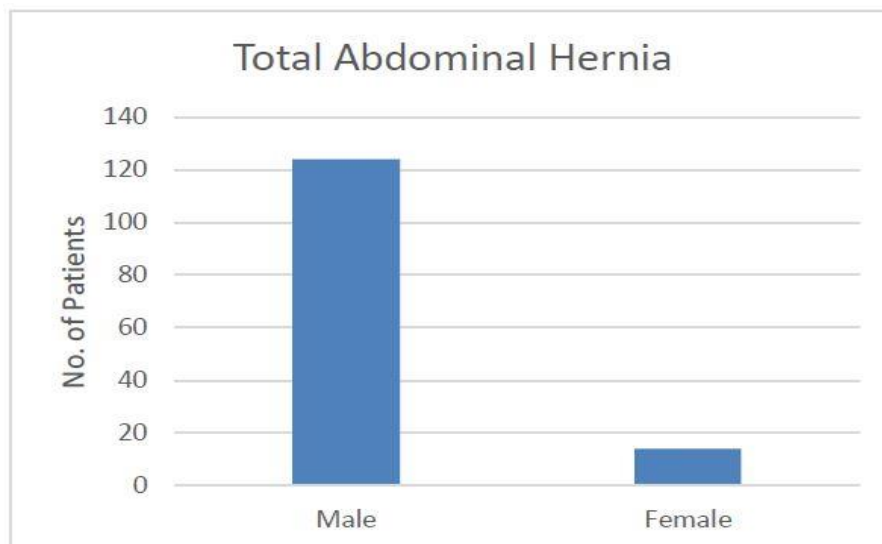
### **METHODS**

After obtaining approval from Institutional ethical committee, data was collected from medical records department of Lakhimpur Medical College and Hospital, North Lakhimpur, a peripheral tertiary medical care in Assam. Data was collected for a period of 24 months from 1<sup>st</sup> January, 2022 to 31<sup>st</sup> December, 2023. The total number of patients admitted in department of surgery was found to be 5742. Out of which 138 patients, admitted for abdominal hernias, 125 were of inguinal hernias. Our study tried to evaluate the prevalence of inguinal hernias in respect of demographic profile and type of hernia.

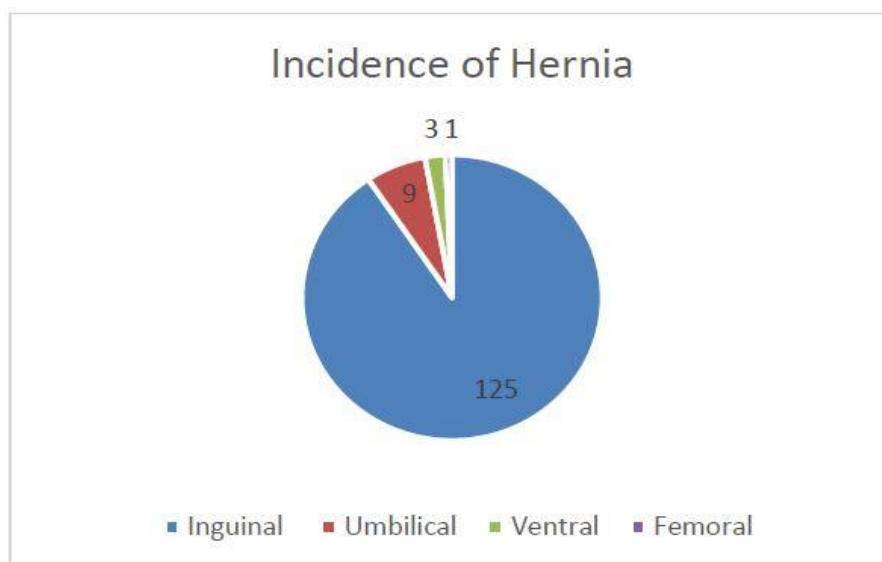
### **RESULTS**

In our study, the total number of patients with abdominal wall was found to be 138. and total number of patients admitted in surgical ward was 5472. And the total number of abdominal hernia admitted in the hospital was found to be 138 (2.4%). And the number of inguinal hernias was 125 (2.17%), umbilical hernia 9 (0.15%), epigastric hernia 3(0.05%), and femoral hernia 1 (0.01%).

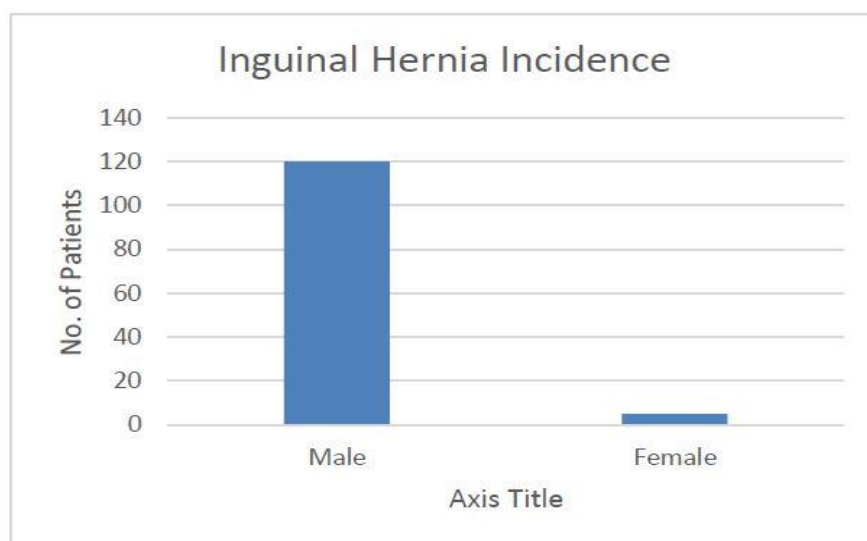
Among the inguinal hernia patients (125), 120 (96%) were males and 5 (4%) were females. Males mostly belonged to 51-60 age group and females in 21-30s. 81 (64.8%) patients suffered from right sided inguinal hernias, 39 (31.2%) from left sided and 5 (4%) from bilateral hernias. Out of which 92 (73.6%) were found to be indirect and 33 (26.4%) to be direct inguinal hernias. 4 (3.2%) of them were congenital in nature. Males were mostly from 51-60 age group with 23%, and females at 21-30 age group with 4.8%. 7 (5.6%) number of patients, all males, presented with strangulated inguinal hernia, and were operated on emergency basis. As surgical interventions, 111 (88%) patients were treated with hernioplasty, 8 (6.4%) with herniorraphy and 6 (4.8%) with herniotomy.



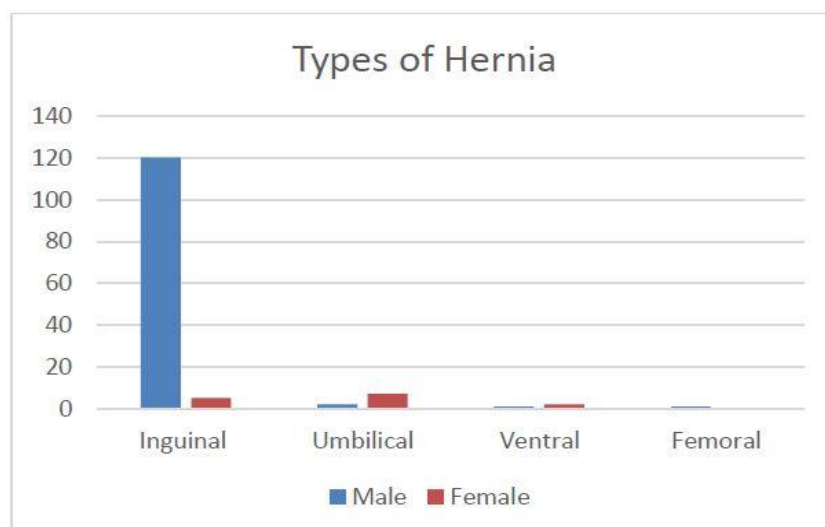
**Figure: 1**



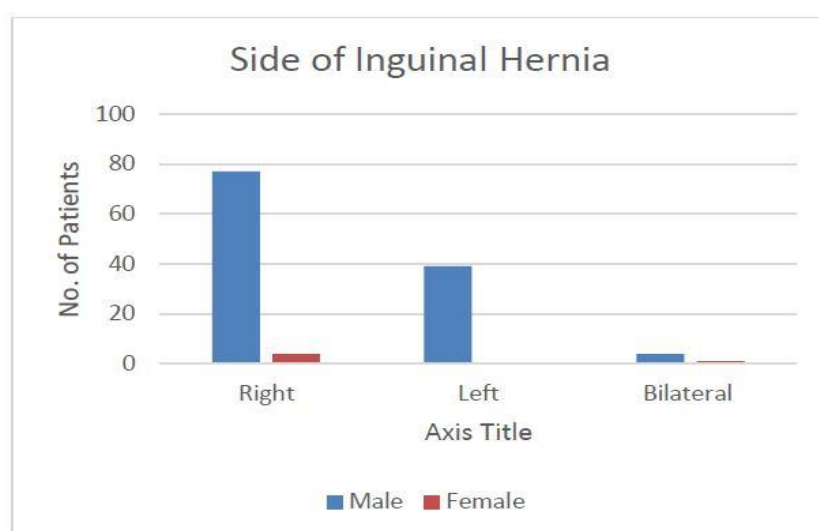
**Figure: 2**



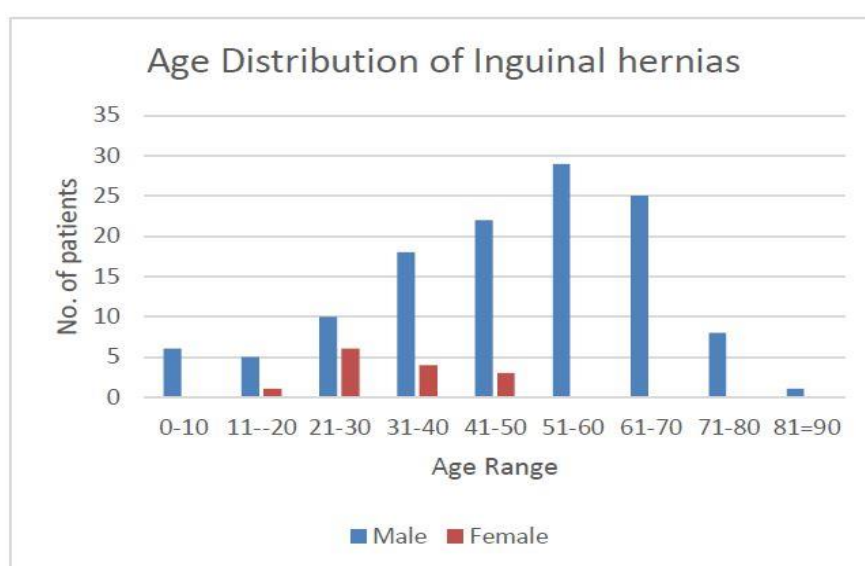
**Figure: 3**



**Figure: 4**



**Figure: 5**



**Figure: 6**

## DISCUSSIONS

Abdominal wall hernia is defined as the protrusion of abdominal content through any defect in the abdominal wall<sup>6</sup>. Inguinal hernia is the commonest finding among all abdominal wall hernias. The diagnosis is mainly clinical and surgical repair remains the mainstay treatment. In our study, 90.5% of all abdominal hernias were inguinal hernias, followed by 6.5% umbilical hernias, 2.1% epigastric and 0.07% femoral hernias.

Malviya V.K et al<sup>8</sup>; in their study found out that, 94.6% were males and 5.3% females. Of their patients, 67.6% suffered from right sided, 29.2% from left sided and 3.2% bilateral inguinal hernia. Munoli SK<sup>9</sup>, and Kurzer M<sup>11</sup>, also found out that 97% were males and 3% females. Agarwal PK et al<sup>13</sup>, also found that right sided hernia to be 63%, left sided 33%, and bilateral hernia 4%. The results are similar to our findings. The preponderance of males may be due to their involvement of various strenuous exercises and heavy weight liftings.

The findings of Shivanagouda Y et al<sup>10</sup>, of direct inguinal hernia of 78% and indirect inguinal hernia 22% is comparable to our findings at 73.6% and 26.4% respectively.

The mean age group for males was 51-60, and females was 21-30. Both Malviya V.K et al<sup>8</sup>, Shivanagouda Y et al<sup>10</sup> also found that the main age group for hernia was (41-60).

We found that, majority of patients (94.4%) had undergone elective operation and 5.6% had to go emergency surgical procedure. Malviya VK et al<sup>8</sup>, Yadav RN et al<sup>12</sup>, had also similar finding to our results.

Our study has its own limitations, as it is based on a newly established medical college, we cannot generalise our findings. We will need a multi centric and a larger time frame to have a generalised result.

## CONCLUSIONS

In our study, we found out Inguinal hernia to be most common among all abdominal hernias. Males were more affected than females, with more common in 51-60 age group. The prevalence is more for indirect inguinal hernia, and mostly on the right side than left.

## REFERENCES

1. Tulloh B, Nixon SJ. Bailey & Love's Short Practice of Surgery. 27<sup>th</sup> ed. Florida: CPR Press; 2018. Chapter 60, Abdominal wall, hernia and umbilicus; p1023-44. Available from: <http://search.worlcat.org/title/1019664400>.
2. Kingsnorth A, Lelanc K. Hernias : inguinal and incisional. Lancet. 2003;362(9395):1561-1571
3. Tebala GD, Kola-Adejumo A, Yee J. Hernioscopy: a reliable method to explore the abdominal cavity in incarcerated or strangulated inguinal hernias spontaneously reduced after general anaesthesia. Hernia. 2019 Apr;23(2):403-406
4. Kao am, Huntington CR, Otero J, Prasad T, Augenstein VA, Lincourt AE, Colavita PD, Heniford BT. Emergent Laparoscopic Ventral Hernia Repairs. J Surg Res. 2018 Dec; 232:497-502
5. O'Rourke MG, O'Rourke TR. Inguinal hernia: aetiology, diagnosis, post-repair pain and compensation. ANZ J Surg. 2012;82:201e6
6. Kingsworth AN, Giorgobiani G, Bennet DH. Hernias, umbilicus and abdominal wall. In: Williams NS, Bulstrode CKZ, Ronan O'Connell P, editors. Bailey and Love's short practice of surgery. 25<sup>th</sup> ed. Edward Arnold (Publisher) Ltd; 2008. p. 968e91
7. Lau H, Fang C, Yuen WK, Patil NG. Risk factors for inguinal hernia in adult males: a case control study. Surgery. 2007;141:262e6
8. Malviya VK, Sainia T.K, Parmar K.K, Sharma S. Demographic study in operated patients with inguinal hernia. Surgical update: Int J surg Orthopedics. 2019;5(1):20-26
9. Munoli SK, Patwari A. a study of factors associated with inguinal hernia at tertiary health care centre. MedPulse Research & Publication-vol 20 issue 3- dec 2021
10. Shivangouda Y Mulikpatil and Mohammed Muzamil Pasha, Study of the clinic – Demographic profile of Inguinal Hernia and the risk factors Associated with Inguinal hernia in the regional population a south indian city, SAS J. Surg, Nov , 2018; 4(11):273-276
11. Kurzer M, Belshan PA, Kark AE. The Lichtensten repair. Surg Clin North Am. 1998;78:1026-46
12. Yadav RN, Maharjan JS, Bajracharya J, Pradhan GBn, Shrestha S. Hernia among Patients admitted to the Department of Surgery of a Tertiary care centre. JNMA J Nepal med assoc. 2023 dec 1;61(268):911-914
13. Agarwal PK. Study of Demographics, Clinical Profile and Risk Factors of Inguinal Hernia: A publicHealth problem in elderly males. Cureus. 2023 Apr 24;15(4) :e38053