

A clinical profile and prevalence of the inguinal hernia at the tertiary health care center

Sanjay Gawale^{1*}, Naresh Rathod²

¹Assistant Professor, ²Associate Professor, Department of Surgery, RIMS, Adilabad, Telangana, INDIA.

Email: tulatr@gmail.com

Abstract

Introduction: Hernia occurrence is extremely uncommon rate of 1.8 per 1000 patient-years. Others have suggested that hernia accidents are more common in elderly patients, many of whom are unaware of their diagnosis and have not sought surgical care. **Aims and Objectives:** To study Clinical Profile and Prevalence of the inguinal hernia at the tertiary health care center. **Methodology:** This is a cross-sectional study carried out in surgery department of tertiary health care center during the one year period i.e. January 2015 to January 2016 in all the Patients at Out-patient Department (OPD) those patient were diagnosed as the Inguinal hernia were include into the study. The patient who was having malignancy and those came for post-operative complications were excluded from the study. Total 42 patients were selected for the study. **Result:** Majority of the of the patients were in the age group of >50 - 54.76% followed by 40-50- 23.80%, 30-40- 11.90%, 20-30-7.14%, 10-20- 2.38%. Majority of the patients were Male i.e. 76.19% followed by Female 23.81%. The majority of the Patient were having Indirect hernia -64.28% followed by Direct hernia i.e. 35.72%. The majority of the patients were having hernia to Left -42.86% followed by Right -33.33% and on Both side -23.81%. The majority of the patients were having symptoms of Pain when coughing, exercising, or bending over-57.14%; Burning sensations over the hernial site -52.38%; Sharp pain over the hernial site-35.71%; A heavy or full sensation in the groin-30.95%; Swelling of the scrotum in men - 26.19%. **Conclusion:** Majority of the of the patients were in the old age group ;Majority of the patients were Male; The majority of the Patient were having Indirect hernia; The majority of the patients were having hernia to Left ; The majority of the patients were having symptoms of Pain when coughing, exercising, or bending over; Burning sensations over the hernial site ; Sharp pain over the hernial site. A heavy or full sensation in the groin. **Keywords:** Prevalence of the inguinal hernia, Direct hernia, Indirect hernia.

*Address for Correspondence:

Dr. Sanjay Gawale, Assistant Professor, Department of Surgery, RIMS, Adilabad, Telangana, INDIA.

Email: tulatr@gmail.com

Received Date: 09/04/2016 Revised Date: 16/05/2016 Accepted Date: 10/06/2016

Access this article online

Quick Response Code:	Website: www.statperson.com
	DOI: 13 June 2016

INTRODUCTION

Hernia occurrence are extremely uncommon rate of 1.8 per 1000 patient-years. Others have suggested that hernia accidents are more common in elderly patients, many of whom are unaware of their diagnosis and have not sought surgical care.^{1,2} In a review of the VA database (W. Henderson, National Surgical Quality Improvement Program, written communication, 2005), the mean age of

patients having hernia emergencies was 77 years, and the rate of death after repair was found to be only 2.2%. The low accident rate of 1.8 per 1000 patients per year found in this strategy, the low mortality rate associated with surgical repair, and the similar pain and health outcomes identified at 2 years suggest that deferring surgery for men without troublesome symptoms is a reasonable option. An Inguinal hernia is a protrusion of abdominal cavity and its contents through the inguinal canal. It is very common in men with lifetime risk of 27% and 3% for women¹. Inguinal hernia repair is a commonly performed general surgery procedure in both adults and children with inguinal hernias constituting more than 95% of all groin hernia repairs.² Inguinal hernias can either be congenital or acquired. The proposed and well known risk factors and causes for inguinal hernias were increased abdominal pressure, pre existing weakness of abdominal muscles, straining during defecation, heavy lifting of weights, obesity, pregnancy etc. Several hypotheses

regarding the etiology of inguinal hernia have been proposed; however, large-scale data on the occurrence of inguinal hernia may provide further understanding to the pathophysiology of inguinal hernia development. This study was undertaken to estimate the prevalence, age and gender differences, risk factors associated with the inguinal hernia. In addition to that the signs and symptoms, nature of presentation were also studied. Predominantly in male populations, the risk factors that have been found to be associated with inguinal hernia were muscle weakness (previous appendectomy or other abdominal operations), physical stress, increased intra-abdominal pressure (chronic constipation and prostatism), smoking, aging, pelvic fractures and trauma, connective tissue disease, and systemic illnesses.³ In females, obesity, pregnancy, and operative procedures have been shown to be risk factors that commonly contribute to the formation of inguinal hernia. However, to the best of our knowledge and extensive literature review, all of these risk factors have not been undertaken in a same study. Henceforth this study was done with the intention of exploring the various aspects of Inguinal hernia and its presentations among adult population.

MATERIAL AND METHODS

This is a cross-sectional study carried out in surgery department of tertiary health care center during the one year period i.e. January 2015 to January 2016 in all the Patients at Out-patient Department (OPD) those patient were diagnosed as the Inguinal hernia were include into the study. The patient who was having malignancy and those came for post-operative complications were excluded from the study. Total 42 patients were selected for the study.

RESULT

Table 1: Age wise distribution of the Patients

Age	No.	Percentage (%)
1-10	0	0.00%
10-20	1	2.38%
20-30	3	7.14%
30-40	5	11.90%
40-50	10	23.80%
>50	23	54.76%
Total	42	100.00%

Majority of the of the patients were in the age group of >50 - 54.76% followed by 40-50- 23.80%, 30-40-11.90%, 20-30-7.14%, 10-20- 2.38%.

Table 2: Genderwise Distribution of the Patients

Sex	No.	Percentage (%)
Male	32	76.19%
Female	10	23.81%
Total	42	100.00%

Majority of the patients were Male i.e. 76.19% followed by Female 23.81%.

Table 3: Distribution of the Patients as per the Type of hernia

Type	No.	Percentage (%)
Direct	15	35.72%
Indirect	27	64.28%
Total	42	100.00%

The majority of the Patient were having Indirect hernia - 64.28% followed by Direct hernia i.e. 35.72% followed by

Table 4: Distribution of the patients as per the Laterality

Laterality	No.	Percentage (%)
Right	14	33.33%
Left	18	42.86%
Both	10	23.81%
Total	42	100.00%

The majority of the patients were having hernia to Left - 42.86% followed by Right -33.33% and on Both side - 23.81%.

Table 5: Distribution of various symptoms observed in the Patinets

Symptoms	No.	Percentage (%)
Pain when coughing, exercising, or bending over	24	57.14%
Burning sensations over the hernial site	22	52.38%
Sharp pain over the hernial site	15	35.71%
A heavy or full sensation in the groin	13	30.95%
Swelling of the scrotum in men	11	26.19%

The majority of the patients were having symptoms of Pain when coughing, exercising, or bending over-57.14%; Burning sensations over the hernial site -52.38%; Sharp pain over the hernial site-35.71%; A heavy or full sensation in the groin-30.95%; Swelling of the scrotum in men - 26.19%

DISCUSSION

In our study Majority of the of the patients were in the age group of >50 - 54.76% followed by 40-50- 23.80%, 30-40-11.90%, 20-30-7.14%, 10-20- 2.38%. Indrani Basu *et al* study showed that the peak incidence of inguinal hernia was 42 to 57 years⁶. It is relatively less common in adolescent age groups. This evidence was not supported by many studies like But in some studies it is shown that age distribution is bimodal peaking at early childhood and old age⁷. Majority of the patients were Male i.e. 76.19% followed by Female 23.81%.The lifetime risk of developing inguinal hernia was 15 to 27% in men and 3% in women whereas in American population the male to female ratio is 5:1^{8,9,10}. Right inguinal hernias were more common than left inguinal hernias. Nearly 20% cases were found to be bilateral inguinal hernias. The ratio of right versus left inguinal hernia was 1.3: 1 in this study which is similar to a study conducted in Khanpur by

Mukesh sangwan *et al* showed 1.45: 1¹¹. The majority of the patients were having symptoms of Pain when coughing, exercising, or bending over-57.14%; Burning sensation over the hernial site -52.38%; Sharp pain over the hernial site-35.71%; A heavy or full sensation in the groin-30.95%; Swelling of the scrotum in men - 26.19%. In USA which showed that the inguinal hernia was associated with older age, obesity, greater height, chronic cough, rural residence¹². This was supported by many other studies like Lau H *et al* and Junge K *et al*, which showed that family history is an important predictor for development of inguinal hernias and as well as recurrent hernia. The other risk factors suggested were chronic cough, chronic constipation, Chronic Diabetes and Prostatic hypertrophy^{13, 14}. Symptoms of prostatism were present in approximately 16% cases while hypertension and dia-betes were present in approximately 11% and 5% cases respectively¹¹.

REFERENCES

1. Erger P. Resultat de l'examen de dix mille observations de hernies. *Extrait du Neuvieme Congrès Francais de Chirurgie*. Paris, France: 1896
2. Malek S, Torella F, Edwards PR. Emergency repair of groin herniae: outcome and implications for elective surgery waiting times. *Int J Clin Pract*. 2004;58:207-209
3. John T Jenkins, Patrick J O'Dwyer "Inguinal hernias". *British Medical Journal*. *BMJ* 336 (7638): Page. 269–272.
4. Ein SH, Njere I, Ein A (2006) Six thousand three hundred sixty-one pediatric inguinal hernias: a 35- year review. *J Pediatr Surg* 41: 980–6.
5. Rutkow IM (2003) Demographic and socioeconomic aspects of hernia repair in the United States in 2003. *Surg Clin North Am* 83: 1045–51.
6. Indranil Basu, Sudhangshou Sekhar Bhoj, Ananda Kumar Mukhopathyay. Retrospective Study on Prevalence of Primary and Recurrent Inguinal Hernia and its Repairs in Patients Admitted to a Tertiary Care Hospital. *Indian Medical Gazette* — JUNE 2013. Page 203 – 213.
7. Burcharth J, Pedersen M, Bisgaard T, Pedersen C, Rosenberg J. Nationwide Prevalence of Groin Hernia Repair. *PLoS one*. 2013; 8(1) *PLoS One*. 2013;8(1):e54367. doi: 10.1371/journal.pone.0054367. Epub 2013 Jan 14.
8. Gulzar, M.R., Iqbal, J., Ulhaq, M.I. and Afzal, M. (2007) Darning vs Bassini repair for inguinal hernia—A prospective comparative study. *Professional Medical Journal*, 14, 128-133.
9. Zimmermann, L.M. and Amson, B.J. (1967) *Anatomy and surgery of hernias*, 2nd Edition, William and Wilkins, Baltimore.
10. Fitzgibbons, R.J., Filipi, C.J. and Thomas, H.Q. (2005) Inguinal hernia. In: Brunnicardi, F.C., Andersen, D.K., Billiar, T.R., Dunn, D.L., Hunter, J.G. and Pollock, R.E., Eds., *Schwartz's Principles of Surgery*, 8th Edition, McGraw- Hill, New York.
11. Mukesh Sangwan¹, Vijayata Sangwan, Mahender Garg, Parveen Mahendirutta, Uma Garg. Abdominal wall hernia in a rural population in India—Is spectrum changing? – *Open journal of epidemiology* 2013, 3, page 135 – 138.
12. Constance E. Ruhl¹ and James E. Everhart. Risk Factors for Inguinal Hernia among Adults in the US Population. *American journal of Epidemiology*. *Am J Epidemiol*. 2007; 165 (10). Page 1154 – 1161.
13. Lau H., Fang C., Yuen W.K., and Patil N.G.— Risk factors for inguinal hernia in adult males: A case- control study. *Surgery*. 141:262-266, 2007.
14. Junge K., Rosch R., Klinge U., Schwab R., Peiper C., Binnebosel M., *et al*. — Risk factors related to recurrence in inguinal hernia repair: a retrospective analysis. *Hernia*. 10:309-315, 2006.

Source of Support: None Declared
Conflict of Interest: None Declared