

Descriptive Study of Inguinal Hernia in the Post Graduated Hospital Khost

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ABSTRACT

Background: Hernia is derived from the Latin word for rupture. A hernia is defined as an abnormal protrusion of an organ or tissue through a defect in its surrounding walls. Although a hernia can occur at various sites of the body, these defects most commonly involve the abdominal wall, particularly the inguinal region. Hernia surgery is one of the earliest forms of surgery and various techniques of hernia repair have been described. The ideal treatment of inguinal hernia should be well defined and should be the least traumatic as regards to both the requested type of anesthesia and the operative technique, least expensive, least per-and postoperative morbidity, the chosen technique should also be the easiest to learn and perform and the positive results should be the most reproducible.

This research was conducted on 214 patients, out of which only 2 patients were female, which are 1.6%, and all other patients were male, which are 98.4%. The average age of all patients are 18-50 years old, of which 42 patients are 18-28 years old, 49 patients are 29-39 years old, and 123 patients are 40-50 years old. This is a descriptive study that was conducted in the form of a case series. This study was conducted on 214 patients which had inguinal hernia. Clinical records of all patients who had inguinal hernia repair between January 1400/01/01 to 1400/12/30 in our hospital were obtained. Intraoperative findings and postoperative complications were reviewed. Statistical Analysis were done by Ms excel, In this sampling study has been done by Universal method. Out of 214 patients, 126 patients had Right inguinal hernia which are 59%, 77 patients had left inguinal hernia which are 36% and 11 patients had hernia on both sides which are 5%. 67 patients had direct inguinal hernia which are 31.1% and 147 patients had indirect inguinal hernia which are 68.9%. The diagnosis of these patients was mostly based on history and clinical signs and symptoms of the patient. Among those patients, 70 were underwent shouldice repair, which are 23.7%, 114 patients underwent bassini repair, which are 53.0 %, and 30 patients underwent meshplasty, which are 14.3%.

Methodology: This is a descriptive study that was conducted in the form of a case series. This study was conducted on 214 patients which had inguinal hernia. Clinical records of all patients who had inguinal hernia repair between January 1400/01/01 to 1400/12/30 in our hospital were obtained. Intraoperative findings and postoperative complications were reviewed. Statistical Analysis were done by Ms excel. In this sampling study has been done by Universal method.

Discussion: We conducted our research in descriptive format on 214 patients who were admitted and operated on in the hospital of public health of Khost during the year 1400 S.S. After the diagnosis, 196 patients were admitted to hospital electively, and 2 patients were admitted to the hospital overnight before the operation, and 18 patients were urgently admitted to the hospital and operated immediately. After primary resection and anastomosis, 18 percent of the patients were men and all of them had indirect hernias that were infected. Out of 214 patients, only two patients were female and all other patients were male, which is 0.9%.

Conclusion: The incidence of inguinal hernia is more in men than in women, which has a ratio of 1.6:98.4. In Afghanistan, inguinal hernia occurs in young adults between 18 and 50 years old, 42 patients between 18-28 years old, 49 patients between 29-39 years old and 123 patients between 40-50 years old.

Research question: What is the type and frequency of inguinal hernia in the post graduate hospital of Khost During 1400 SS year?

Keywords- Hernia, inguinal hernia, Herniorrhaphy, Surgical mesh, Postoperative complications.

I. INTRODUCTION

A hernia is a protrusion of the viscera covered by the peritoneum through a natural or a pathological opening in the muscular-aponeurotic layer of the abdominal wall. The Latin term Hernia means a break in part of a structure. The problem of treatment of hernias of the abdominal wall is still relevant. It can be explained by the high prevalence of this pathology and dissatisfaction treatment results. External abdominal hernias occur in 6-7% of all men and in 2.5% women in all population, this pathology affects approximately 510-570 million humans. That is why hernia repair is one of the most common operations in abdominal surgery, accounting for 10-21% of all surgical interventions. In the world more than 1.5 million interventions for hernias of the abdominal wall are performed annually, in the United States, this figure is about 700 thousand, in Germany 153 thousand. Patients with abdominal wall hernias account for up to 25% of all patient's surgical hospital. To date, significant progress has been made in planned hernia treatment, postoperative mortality in planned hernia repair usually does not exceed 0.2-0.3%. At the same time, with the development of complications and emergency operations for complicated hernias, the results of surgical treatment are worse, in case of infringement mortality is at least 2-8% and progressively increases with the length of time elapsed from the onset of the development of complications to surgery and an increase in the age of patients, especially after 60-65 years (up to 16-20%). Disappointing the results of treatment of other complications (inflammation of the hernia, traumatic hernia area, etc.).

The importance of the problem is also determined by the trend towards an increase in the incidence hernias, noted recently. This is due to the increase in the number of people elderly and senile age with their inherent chronic diseases of the organs respiration and circulation, urinary system, chronic constipation, leading to a periodic increase in intra-abdominal pressure, as well as diseases metabolism (obesity, diabetes). It is known that the frequency of hernias increases with age, especially for inguinal, umbilical and femoral hernias. Infringement frequency hernia and the need for hospitalization also increases with age. On the other hand, increase in the number of laparotomies and expansion of the scope of surgical interventions by organs of the abdominal cavity led to a large number of postoperative hernias due to violation of the anatomical and physiological integrity of the abdominal wall. Availability hernia violates the general condition of patients, reduces their ability to work and often leads to severe complications, the most formidable of which is infringement. Number of patients with infringement reaches 15-18% of the total number of patients with hernias. Postoperative 5 mortality in this emergency is from 3 to 8%, and for patients older 60 years it increases to 16-20%. For the surgical treatment

of abdominal hernias, more than 30 methods are currently known. operational methods and modifications. In order to eliminate the hernial defect developed numerous techniques - from simple autoplasmic methods due to their own patient tissues to complex reconstructive operations using artificial materials. However, as clinical experience shows, none of this method guarantees from recurrent hernias. The economic importance of treating patients with hernias cannot be underestimated.

Because every year it requires huge additional costs for hospitalization and outpatient treatment. Today it is necessary to operate 11.4 - 23.3% patients with only recurrent hernias. That's why it's currently a problem development of new methods of operations, prevention of complications after hernia repair remains up to date.

II. RESEARCH QUESTION

What is the type and frequency of inguinal hernia in the post graduate hospital of Khost During 1400 SS year?

III. METHODS

This is a descriptive study that was conducted in the form of a case series. This study was conducted on 214 patients which had inguinal hernia. Clinical records of all patients who had inguinal hernia repair between January 1400/01/01 to 1400/12/30 in our hospital were obtained. intraoperative findings and postoperative complications were reviewed. Statistical Analysis were done by Ms excel. In this sampling study has been done by Universal method.

IV. RESEARCH VALUE

In Khost province, there has not been complete research on the surgical treatment of inguinal hernia, and also patients from all districts of Khost province are visiting to Khost post graduated hospital due to suspected diagnosis, incomplete treatment, surgical team of OPD clinics. The existence of remote areas, increased heavy work cases inguinal hernia in adult, the wrong communication routes and the lack of awareness among the people has caused to increase in the incidence of complications and deaths. To be done so that it remains a foundation for future research doctors.

V. ITS BENEFITS IN AFGHANISTAN'S HEALTH SYSTEM

We know that inguinal hernia is the main cases of intestinal obstruction, it eventually causes gangrene of the intestines and causes general peritonitis. So this research can be useful in preventing these complications.

Objectives: To reach for the results of descriptive study of inguinal hernia in khost post graduate hospital.

VI. RESEARCH PARAMETERS

In order to investigate the incidence of this disease, the following parameters were taken into consideration. Sex, age, residence, comorbidities,

Table 1: Incidence of inguinal hernia by sex

Cases	Number of the patient	Percentage
Male	212	99 %
Female	2	1 %
All cases	214	100 %

According to above evaluation, it is known that, from the point of view of gender, the occurrence of inguinal hernia is less in women and more cases in men, the reason may be that men do heavy work in their daily life.

Table 2: Incidence of Inguinal Hernia by Age

Age	Number of patients	Percentage
18 -28	42	19.6 %
29 – 39	49	122.9 %
40 – 50	123	57.5 %
All cases	214	100 %

In above table the incidence of inguinal hernia is more in young people, because of heavy work. in the international literature It has been reported that the incidents of direct inguinal hernia are twice as high in adult. In our research that is approximately match.

Table 3: Incidence of Inguinal Hernia by Side

Site of hernia	Number of patients	Percentage
Right	126	59 %
Left	77	36 %
Bilateral	11	5 %
All cases	214	100 %

Based on the side, 59% of our patients had right sided, 36% left sided and 5% both sided hernias, which is very close in compared with research that has done in Lahore hospital Pakistan and we have the same result that 53.3% of them right sided left sided. It is 46.7%. If compared to the Indian hospital, those who have most of the cases of inguinal hernia are unilateral, and most of the cases are on the right side.

Table 4: Table of inguinal hernia according to procedures

Procedures	Number of patients	Percentage
Shouldice	70	32.7 %
Bassina	114	53 %
Hernioplastiy (mish plasty)	20	14.3 %
All	214	100 %

During the period of our training, Hernioraphy procedure was used more than Besani method, therefore, more patients were operated with Besani method. Unfortunately, tension-free repair is less popular.

Table 5: Post-operative complication of inguinal hernia

Complication	Number of patients	Cases
Hematcele	5	2.3 %
Neuralgia	3	1.4 %
Infection	2	1.4 %
Without complication	2.3	94.86
All complicated patient	11	5.14 %
All operated patient	214	100 %

The percentage of complications after the operation in this study is almost appropriate, neither too much nor too little.

A large number of researches have been conducted around the world about hernia, which have been recorded in medical literature, journals, magazines and medical books. We mention several investigations.

1. Guwahati Medical College Research:

This study was conducted in 2013 at Guwahati Medical College, India General surgery North Eastern Indira Gandhi Regional institute of Health and Medical sciences, all patients were male and their ages were 61-71 years old, 52 of them (91,22%) patients had one-sided inguinal hernia while 5 (8,77%) patients had bilateral inguinal hernia in 50% (87,71%) patients without any complications and 7 (12,28 %) patients had some complications, such as Obstruction, Strangulation, etc. 50 (87.71%) patients underwent elective surgery and 7 (12.28%) patients underwent urgent surgery. was [1]

2. Mulago Hospital, Kampala, Uganda Research:

This study was conducted at Mulago Hospital, Kampala, Uganda. Total 256 patients were selected for this thstudy during a period of 12 months, but only 220 patients agreed to participate in the study. The patients were lost from the follow-up and 208 patients remained. The majority of patients (76.9%) were presented as emergency cases. Only 48 patients underwent elective surgery. [2]

3. *Lahore Ghurki trust teaching hospital Research:*

This study was conducted in the surgery department of Lahore Ghurki trust teaching hospital during three years from 2006 to 2009. 120 patients were admitted with the diagnosis of inguinal hernia and all of them were above 18 years old, and able to undergo surgery. Referral and all patients were candidates for Lichtenstein technique of Mesh Repair. Mean age of patients was (52,2+_{15,1}).

64 (53.3%) patients had right inguinal hernia, 56 (46.7%) patients had left inguinal hernia, 68 (56.7%) patients had indirect inguinal hernia and 52 (43.3%) patients had direct inguinal hernia. There was mild pain in 56 (46.7%) patients, moderate pain in 40 (33.3%) patients, and severe pain in 24 (20.0%) patients. severe pain was present in 24 (20.0%) patients. [3]

VII. DISCUSSION

We conducted our research in descriptive format on 214 patients who were admitted and operated on in the hospital of public health of Khost during the year 1400 S.S. After the diagnosis, 196 patients were admitted to hospital electively, and 2 patients were admitted to the hospital overnight before the operation, and 18 patients were urgently admitted to the hospital and operated immediately. After primary resection and anastomosis, 18 percent of the patients were men and all of them had indirect hernias that were infected. Out of 214 patients, only two patients were female and all other patients were male, which is 0.9%. The average age of all patients is 18-50 years old, of which 42 patients are 18-28 years old, 49 patients are 29-39 years old, and 40-50 years old are 123 patients. Out of 214 patients, 126 patients had hernia on the right side which is 59%, 77 patients had hernia on the left side which is 36% and 11 patients had hernia on both sides which is 5%. 67 patients had direct inguinal hernia which is 31.1% and 147 patients had indirect inguinal hernia which is 68.9%. The diagnosis of these patients was mostly based on the clinical signs and symptoms and the patient's history. Of these patients, 70 patients underwent shoulder repair, which is 23.7%, 114 patients underwent hip repair, which is 53%, and 30 patients underwent mesh surgery, which is 14.3%. Alhamdulillah, all of the patients who were operated on have been cured and the death rate is zero, and only 12 patients, who are 5-6 years old, were previously operated on. Hematocele occurred, which is 2.3%, 3 patients developed neuralgia after surgery, which is 1.4%, and 3 patients had infection, which is 1.4%. A total of 11 patients had post-operative complications, which is 5.14%, and 203 patients had other complications.

VIII. CONCLUSION

1. The incidence of inguinal hernia is more in men than in women, which has a ratio of 1.6:98.4.

2. In Afghanistan, inguinal hernia occurs in young adults between 18 and 50 years old, 42 patients between 18-28 years old, 49 patients between 29-39 years old and 123 patients between 40-50 years old.
3. In Khost, the incidence of right inguinal hernia is 59%, 36%, left-sided and 5% is bilateral inguinal hernia.
4. The incidence of direct inguinal hernia is less than indirect inguinal hernia, only 31.1% is direct and 68.9% is indirect.
5. The best diagnostic method of this disease is the history and physical examination, also ultrasound is used as a supplementary examination.
6. Post-operative complications for inguinal hernia are very rare, only 5.14% of patients reported complications and no death occurred.
7. Strangulation of hernial content did not occur in direct inguinal hernia.

Limitations of the study:

1. Low level of public awareness.
2. No or late patient visits of patient to hospital.
3. The investigating doctor is very busy in emergency cases.
4. The economic condition of the people is very bad.
5. Absence of a female doctor, who has a very important role in the diagnosis and treatment of inguinal hernia, especially in female patients.

Recommendations:

1. I requested that we must have a training hospital in our province and now, we have a training program in Khost Hospital.
2. We wish to have an active surgical service in every district hospital so that people do not have to go to the zone or province.
3. I hope that the Honorable Department of Supply and Expertise will implement such a program to introduce its graduates and their excellent services to the society so that the general public can understand the value of trained people.
4. I hope that seminars will be given for the new modern training methods of doctors
5. I hope that this study will not be enough and doctors will learn more in cooperation with the honorable department so that we can continue with the caravan of knowledge.

REFERENCES

- [1] Malangoni MA, Gagliardi RJ. Hernias. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, editors. Sabiston's Textbook of Surgery. 17th edition. Philadelphia: Elsevier-Saunders; 2004. p.1199-218.
- [2] Roseano M, Rassetta G, Pozzetto B, Babich F, de Manzini N. The treatment of inguinal hernia in the elderly: open technique or laparoscopic approach? Acta Biomed. 2005;76 Suppl 1:52-5.
- [3] Amid PK, Shulman AG, Lichtenstein IL. Open "tension-free" repair of inguinal hernias: the Lichtenstein technique. Eur J Surg. 1996;162(6):447-53.

- [4] Amid PK, Lichtenstein IL, Shulman AG, Hakakha M. Biomaterials for “tension-free” hernioplasties and principles of their applications. *Minerva Chir.* 1995;50(9):821-6.
- [5] Morris-Stiff GJ, Hughes LE. The outcomes of nonabsorbable mesh placed within the abdominal cavity: literature review and clinical experience. *J Am Coll Surg.* 1998;186(3):352-67.
- [6] Voyles CR, Richardson JD, Bland KI, Tobin GR, Flint LM, Polk HC Jr. Emergency abdominal wall reconstruction with polypropylene mesh: short-term benefits versus long-term complications. *Ann Surg.* 1981;194(2):219-23.
- [7] Leber GE, Garb JL, Alexander AI, Reed WP. Long-term complications associated with prosthetic repair of incisional hernias. *Arch Surg.* 1998;133(4):378-82.
- [8] Klosterhalfen B, Klinge U, Hermanns B, Schumpelick V. Pathology of traditional surgical nets for hernia repair after long-term implantation in humans. *Chirurg.* 2000;71(1):43-51.
- [9] Sher W, Pollack D, Paulides CA, Matsumoto T. Repair of abdominal wall defects: Gore-Tex vs. Marlex graft. *Am Surg.* 1980;46(11):618-23.
- [10] Brown GL, Richardson JD, Malangoni MA, Tobin GR, Ackerman D, Polk HC Jr. Comparison of prosthetic materials for abdominal wall reconstruction in the presence of contamination and infection. *Ann Surg.* 1985;201(6):705-11.
- [11] Malik AM, Khan A, Talpur KA, Laghari AA. Factors influencing morbidity and mortality in elderly population undergoing inguinal hernia surgery. *J Pak Med Assoc.* 2010;60(1):45-7.
- [12] Mansouri M, Ekjam S, Hudairi A, Sannussi OI, Fakheri A. Emergency abdominal surgery in Libyan elderly patients. *Sci Med J.* 2005;17(3):57-65.
- [13] Behnia R, Hashemi F, Stryker SJ, Ujiki GT, Poticha SM. A comparison of general versus local anesthesia during inguinal herniorrhaphy. *Surg Gynecol Obstet.* 1992;174(4):277-80.
- [14] Pavlidis TE, Symeonidis NG, Rafailidis SF, Psarras K, Ballas KD, Baltatzis ME, et al. Tension-free by mesh-plug technique for inguinal hernia repair in elderly patients. *Scand J Surg.* 2010;99(3):137-41.
- [15] Sanjay P, Woodward A. Inguinal hernia repair: local or general anesthesia? *Ann R Coll Surg Engl.* 2007;89(5):497-503.
- [16] Frazzetta M, Di Gesù G. Inguinal hernia surgery performed on elderly cardiopath patients. *Acta Biomed.* 2005;76; Suppl 1:42-5.
- [17] Bax T, Sheppard BC, Crass RA. Surgical options in the management of groin hernias. *Am Fam Physician.* 1999;59(1):143-56. Correct and republished in: *Am Fam Physician.* 1999;59(4):893-906.
- [18] Primatesta P, Goldacre MJ. Inguinal hernia repair: incidence of elective and emergency surgery, readmission and mortality. *Int J Epidemiol.* 1996;25(4):835-9.
- [19] Dabbas N, Adams K, Pearson K, Royle G. Frequency of abdominal wall hernias: is classical teaching out of date? *JRSM Short Rep.* 2011;2(1):5.
- [20] Fitzgibbons RJ, Filippi CJ, Quinn TH. Inguinal hernias. In: Brunicardi FC, Anderson DK, Billiar TR, Dunn DL, Hunter JG, editors. *Shwartz's Principles of Surgery.* 8th edition. New York: McGraw Hill; 2005. p.1353-1394.
- [21] Erhan Y, Erhan E, Aydede H, Mercan M, Tok D. Chronic pain after Lichtenstein and preperitoneal (posterior) hernia repair. *Can J Surg.* 2008;51(5):383-7.
- [22] Poobalan AS, Bruce J, Smith WC, King PM, Krukowski ZH, Chambers WA. A review of chronic pain after inguinal herniorrhaphy. *Clin J Pain.* 2003;19(1):48-54.
- [23] Stephenson BM. Complications of open groin hernia repairs. *Surg Clin North Am.* 2003;83(5):1255-1278.
- [24] Grunwald LJ, Schwaitzberg SD, Rattner DW, Jones DB. Is laparoscopic inguinal hernia repair an operation of the past? *J Am Coll Surg.* 2005;200(4):616-20.
- [25] Nehme AE. Groin hernias in elderly patients. Management and prognosis. *Am J Surg.* 1983;146(2):257-60.