

## Types of Hernia in Sulaimani Governorate



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### Abstract

A retrospective study done to know the prevalence of abdominal wall hernia from the operations done during the period of 1<sup>st</sup> September 1994 till the 30<sup>th</sup> September 2000. Among 21222 patients operated 4554 (21%) were hernias of different types. The mean age of the patients with abdominal wall hernias was around 46 years. Inguinal hernias appear to affect children & adolescents (0-30) years more, while other types appear to affect middle ages (21-50) years more. Hernias were mostly of inguinal type, mainly unilateral on the right side, followed by umbilical (and Para umbilical), incisional, epigastric & femoral hernia.

**Keywords:-** abdominal wall hernias, inguinal hernias, incisional hernias.

### Introduction

Hernia is protrusion of a viscus or part of viscus from one cavity to other cavity.

Hippocrates (400 BC) - first described hernia. Celsus (1st century AD) was first to advice surgery. Gimbenat, Hasselbach, Cooper (1760-1820) made careful dissection of inguinal canal. Lucas championniere (1881) first opened inguinal canal for surgery. Marcy (1881) - first to describe logical step in reconstructive repair & Bassini (1888-1890) - first to provide strong posterior wall [1,2].

Hernias are classified into congenital & acquired. It may be external or internal, ventral or dorsal. The ventral is classified into inguinal, epigastric, umbilical, paraumbilical, Spigelian & incisional. The inguinal hernias are classified into congenital & acquired. It may be direct, indirect or mixed. It may be also reducible or irreducible, obstructed, strangulated or inflamed. It is known that 2-5% of population are suffering from hernias of which 70 to 75% are inguinal hernias, 15 to 18% femoral hernias, 7 to 9% umbilical hernias & 1 to 2% other types & it is known that 10% of all operations are

hernias operations, 70% of these for Inguinal hernia & 30% for other hernias [1-3].

The etiologies for indirect inguinal hernias are said to be either due to patent processus vaginalis or like other types of hernias due to raised intra abdominal pressure from chronic cough, constipation, straining, micturition, weight lifting & ascites or stretching of abdominal muscles from obesity, pregnancy, ascites or others & sometimes no obvious cause [4].

Diagnosis done from complaints of inguinal swelling or vague discomfort pain & by clinical exam detecting inguinal bulge by cough impulse, finger invagination test, internal ring test & three finger test (Ziemans test) [5].

Differential diagnosis include; inguinal lymphadenopathy, femoral hernia, hydrocele of cord, lipoma of cord, ectopic testes, femoral adenitis & saphenous varix [1].

The aim of this study is to know the prevalence of hernia & its different types in Sulaimani governorate.

### Patients&Methods

This is a retrospective study done in Chwarbakh teaching hospital in Sulaiman. The information were collected from the case sheets in the Archive of all the patients who underwent surgical operation for all types of the abdominal wall hernia from the period of 1<sup>st</sup> September 1994 til the 30<sup>th</sup> September 2000. Then analysis of the cases was done to know which hernia is more common, sex difference and relation of hernia to the age of the patients. hernias are mainly a male disease, femoral hernias affect female and males equally .

### Results

The results are summarized in the following tables:

Table (1) number & percentage of different types of hernias

Type of hernia	Number of patients	Percentage
Inguinal	3906	85%
Umbilical	340	7.46%
Incisional	213	4.67%
Epigastric	91	2%
Femoral	4	0.87%
Total	4554	100%

This table shows that inguinal hernias constitute 85% of all hernias, femoral hernias around 1%, incisional hernias around 5% umbilical hernias around 7% & epigastric hernia 2%

Table (2) different types of hernia in relation to sex:

Type of hernia	Male	%	Female	%
Inguinal	3515	90%	391	10%
Femoral	0002	50%	002	50%
Incisional	0064	30%	149	70%
Epigastric	0022	24%	069	76%
Umbilical	0057	16.8%	283	83.2%
Total	3660	80%	794	20%

This table shows that overall, males are affected more than females, inguinal while incisional, umbilical & epigastric hernias are predominantly a female disease. (The P-value is less than 0.01)

Table (3) inguinal hernia in relation to sex:

Inguinal hernia	M	%	F	%	Total
Right inguinal hernia	2036	89.5%	239	10.5%	2275
Left inguinal hernia	1341	90.8%	136	9.2%	1477
Bilateral inguinal hernia	13.8	89.6%	16	10.4%	0030

This table shows that inguinal hernias are bilateral in only about 10-14% of cases, it affects the right & left side almost equally & it is mainly a male disease.

(The P-value is 0.9046)

(M=male, F=female)

Table (4) different type of hernia in relation to age: This table shows that hernias

Age (years)	Inguinal	Femoral	Incisional	Umbilical	Epigastric	Total
0-10	1472			33	5	1510
11-20	562		10	16	7	0595
21-30	425		41	77	25	0568
31-40	239	1	56	103	27	0426
41-50	345	2	61	71	19	0498
51-60	387		24	28	3	0442
61-70	382	1	18	11	3	0415
71-80	87		2	1	2	0092
81-90	7		1			0008

affect children, adolescents & adults with decreasing prevalence above 70 years of age. Inguinal hernias appear to affect more children & adolescents (0-30) years, while other types appear to affect more middle ages (21-50) years.

(The P-value is less than 0.01)

### Discussion

This study is carried out to know the prevalence of hernias in Sulaimani governorate from the operations done during the period of the study. This will give an idea about the prevalence of hernia in the region but not the real prevalence as many patients are not symptomatic & may not even seek medical advice. It appeared that among (21222) patients that where operated upon,(4554) of them were hernias of different types, constituting about 21% of all operations done during that period. This is in agreement with other studies stating that inguinal hernia repair (IHR) is the most common general surgical procedure in the United Kingdom, with an estimated 80 000 cases a year[3]& all over the world

hernia surgery constitutes a significant portion of the operations performed by a general surgeon[6]. A review of epidemiologic data provides some preliminary answers. Recent studies from the National Center for Health Statistics show that approximately 750,000 groin

herniorrhaphies are completed annually in the United States. More than 80% of these operations involve the use of mesh prosthesis and are performed on an outpatient basis. Despite the large number of hernioplasties completed, the public's understanding of hernias and their management remains unsophisticated [7]. The mean age of the hernia patients was 46 years in agreement with the results of other studies showing that the mean age of the patients with hernia was around 50 years [2].

Another study reported the mean age of patients with external hernias to be around 57 years [8].

Regarding number & percentage of different types of hernias in this study, table number 1, shows that the most common hernia was inguinal followed by umbilical, incisional, epigastric & femoral. These results are in accordance with other international studies showing that inguinal hernia repair (IHR) is the most common general surgical procedure [3].Another

study confirmed that inguinal hernia (70%) was the most frequent type of hernia seen, followed by paraumbilical hernia (20%)[9].

Regarding the sex distribution of the hernia patients, table number 2 showed that hernia in general is a male disease specially inguinal hernia which is the most common type, while femoral hernia appeared to affect both sexes equally, although the small number of the cases in the study(only 4) may not show accurately the sex distribution of femoral hernias which show a female predominance in the literature[4,5,10],but the other types showed female predominance as it is the case with other studies[11,12].Another study showed that there was a marked rise in the incidence of primary direct & bilateral hernia in males from the fourth and fifth decades& postulated that this is because defective collagen synthesis in the tissues of the inguinal region occurs more in males than in females[13].

Table Number 3 shows that inguinal hernias are mainly a unilateral disease & bilateral in only around 10-14% of cases & that it affects the right and the left sides almost equally. These features are also going with the results of other studies done in USA showing that inguinal

hernias are unilateral in 82%, but these studies show higher records of bilateral occurrence of about 17% [14-20].

Table 4 shows that hernias in general affect mostly children, adolescents & adults with decreasing prevalence above 70 years of age. Inguinal hernias appear to affect more children & adolescents (0-30 years) indicating the importance of congenital defect is it's pathogenesis, while other types appears to affect more middle ages (21-50) indicating the importance of acquired factors in their pathogenesis. Other reviewed literature duplicates our findings [1- 4, and 12].

The results are analyzed statically by using Chi-Square test. Which showed that the

P-value for table 2 is less than 0.01, for table 3 is 0.9046, and for the table 4 is less than 0.01.

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## أنواع الفتق فى السليمانية

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### الخلاصة

اظهرت الدراسة ان حوالى ۲۱٪ من العمليات الجراحية التي اجريت فى احدى المستشفيات الجراحية فى السليمانية كانت لحالات الفتق ، وان الفتق المغنبي الجانبي الايمن كان النوع الاكثر شيوعاً وان معدل عمر المرضى كان 46 سنة.

جۆره كانى گهده بۆس (قۆرى) له سليمانية.

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### پوخته

تۆيزينه وه كه نه وهى دەرختا كه ۲۱٪ ي نهو نه شته رگه ريانه كه له يه كينك نه نه خوششانه كانى سۇلەيمانىدا كراون بو گهده بۆس (قۆرى) بوه و ه قۆرى بنى رانى لاي راست له هه مو جۆره كلنى كه زۆرتەر بوه، وه ناوه ندى نه به نه نه خوشه كان 46 سال بوه.