Original article:

A Clinico –pathological study and management of incisional hernia

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Abstract

In this study, an attempt was made to study and management of incisional hernia. The incidence of incisional hernia is about 1.7% of all external hernias. Maximum age of incidence in the present series is between 30 and 50 years. The average duration of symptoms is six months to one year and the onset is within 2-4 years. Sixty five [65%] incisional hernia patients are from poor socioeconomic status while the other 35% are from upper and middle class group. Swelling in the abdominal wall is the common presenting symptom. Diagnosis of incisional hernia is possible in most of the cases by clinical examination along without resort to any special investigations. Manigots keel operation, Mayo operation and anatomical repair inlayers in selected cases of incisional hernia have given good results.

Key words: Incisional Hernia, recurrence, repair, management

Introduction

Incisional hernia is a diffuse extrusion of peritoneal and abdominal contents through a weak scar of an operation or accidental wound [1]. Incisional hernia is truly iatrogenic which occurs due to the failure of the lines of closure of abdominal wall following laparotomy [2,3].In the majority cases of incisional hernia, the diagnosis is generally obvious. The size of the hernia may be small and therefore insignificant and the owner of the hernia may not be aware of it presence while some other takes it s a natural consequence of surgery. On the other hand it may attain such dimensions as to form a second abdomen outside the natural abdominal boundaries. No incision in the abdomen is immune to development of hernia. It occurs after midline, para median, oblique incision and also the incisions in the perineum [4]. In this clinical study of incisional hernia emphasis has been laid on the etiological aspects of incisional hernia. With careful preoperative preparation and correct post operative care, the chances of cure in most of the uncomplicated incisional hernias are fairly good. It results after complication of abdominal surgery [5]. Incisional hernias have different etiologies related to the patient, the surgical technique and suture material [6-8]. Following laparotomies, the Incidence of incisional hernia 2 to 11% [9]. Herniorraphy as a planned procedure may be carried out in patients about 70 years with minimum morbidity and mortality rates.

Material and methods:

Details of clinical study of 20 patients of incisional hernia admitted in surgical were taken. No particular criteria were adopted in selecting the patient and the cases were studied as per the proforma which was designed for the study. An attempt was made to get the detailed history of illness as this is very important to find out the cause of hernia. A thorough general

examination was made and certain aspects like obesity, chronic bronchitis, chronic constipation, stricture urethra and enlarged prostrate were particularly looked for. While presenting the cases only relevant and positive findings were recorded to make the case report as brief. Routine laboratory investigations of blood, urine, stool, chest X ray or screening were done. Particular attention was paid to sex incidence, the type of patients, pre disposing causes, duration of symptoms and results of various surgical procedures. Cases were followed from 6 months to 3 years.

Observations:

Table 1: Incidence of incisional hernia in relation to age & sex

Sl.No	Age Group (years)	Male	Female	Percentage (%)
1.	0 – 10	--	--	--
2.	11 – 20	--	--	--
3.	21 – 30	2	2	20
4.	31 – 40	1	5	30
5.	41 – 50	--	6	30
6.	51 – 60	--	3	15
7.	61 – 70	--	1	5

Table 2: Incidence in relation to the type of incision

Sl. No.	Types of Incision	No. of Cases (Mahavir Hospital)	%	Shah(%)	Shouldice(%)	Acman's (%)
1.	Supra umbilical midline	1	5	28	-	5.4
2.	Infra umbilical midline	12	60	42	33	35
3.	Right Para mrdisn (upper & lower)	2	10	-	33	38
4.	Transverse Suprapubic	3	15	-	-	-
5.	Right Iliac (Mc Burny's)	1	5	4	21	21
6.	Right Lumbar	1	5	-	-	-

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Table 3 Clinical presentation of incisional hernias

Complaints	No.	Percentage
Swelling	20	100
Pain	5	25
Vomiting	3	15
Constipation	3	15

Table 4: Interval between surgeries

Time of occurrence	No. of cases	Percentage	Shouldice
Less than year	12	60%	67.8%
1 – 2 years	3	75%	96.6%
2 – 4 years	4	95%	93.3%
4 – 6 years	--	--	97%
6 – 9 years	1	100%	100%

Table 5: Role of obesity in incisional hernia

Sex	Obese	Percentage	Not obese	%
Male	--	--	3	15
Female	7	35	10	50

Table 6 : Pre-Operative hemoglobin status in incisional hernias

Sl.No.	Hemoglobin level in gm %	No. of cases	Percentage
1.	<10	6	30
2.	10 – 12	14	70
3.	>12	--	--

Table 7: Methods of repair of incisional hernias

Method	No. of cases	Percentage
Keel	6	30
Mayo’s double breasting	7	35
Anatomical repair	4	40
Marceline Mesh	3	15

Table 8: Incidence of post-operative wound infection

Sl. No.	Author	No. of cases infected	No. of cases operated	Percentages
1.	Mahavir hospital (Present series)	2	20	10%
2.	Francis C. Usher	6	49	12%
3.	K.A. Subramaniam	3	28	10%
4.	S.L. Agarwal	3	26	11%

Table 9: Recurrence of incisional hernias

Sl. No.	Author	No. of cases repaired	No. of cases with recurrence	% of recurrence	Method of repair
1.	Mahavir Hospital Series	20	1	5%	Mayo's double breasting
2.	Rodney Maingot	103	7	6.8%	KEEL
3.	Donal Yaing	15	1	6.7%	Anatomical closure with lateral relaxing incisions
4.	Francis C Usher	49	2	4%	Reinforcement with Marlex mesh
5.	Re mine W. H	27	7	26%	Repair with Tantalum mesh implant.

Results and discussion:

Incidence of incisional hernia was maximum of 60% in between 31- 50 years (Table 1). This may be due to the fact that certain operations like caesarian section or tubectomy are commonly performed in this age group. The youngest individual in our series was 22 years old and the oldest was 62 years. As seen from the table incisional hernias was found to be 6 times more common in females than males. Twenty cases of incisional hernia were admitted in Mahavir hospital, Hyderabad and presented in this work (Table 2) .The maximum age of incidence of incisional hernia in the present series has been between 31 to 50 years average age being 40 years. Out of 20 cases studied the ratio between male and female patients has been 1:5.6. The incidence in female patients is more because of laxity of abdominal muscles due to multiple pregnancies. In table 3 swelling was the common complaint of incisional hernias. Out of 20 cases of incisional hernia 6 patients have history of wound infection during post operative period of previous operation. Nine patients had cough in their post operative period while three had constipation which could perhaps explain the occurrence of incisional hernia in them. Incisional hernia was more common in

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undernourished patients. In selected cases anatomical repair also proved satisfactory with good results. Seven cases underwent operation by Mayo , six patients were by operated by Keel and four patients operated by anatomical repair, three patients had Marceline mesh implanted to cover the gap. Two out of the 20 cases had mild infection with duration of edges post operatively. The infection rate was 10%.

Compared to inguinal hernia incisional hernia is less common. The incidence of incisional hernia is about 1.7% of all external hernias. The incidence is very common in multiparous women. Incisional hernia are more common in the infra umbilical region of the abdominal wall. Sixty five [65%] incisional hernia patients are from poor socioeconomic status while the other 35% are from upper and middle class group. The average duration of symptoms is six months to one year and the onset is within 2-4 years after surgery (Table 5). Swelling in the abdominal wall is the common presenting symptom. Most of the incisional hernias are reducible. Infection of the wound, chronic chough straining or stool and micturition during post operative period seems to be a common predisposition factor of the abdominal wall and the subsequent development of incisional hernia. Preoperative details and methods of repair are shown in Table 6 and 7. Diagnosis of incisional hernia is possible in most of the cases by clinical examination along without resort to any special investigations. Manigots keel operation, Mayo operation and anatomical repair inlayers in selected cases of incisional hernia have given good results. There was one recurrence of hernia amongst 20 patients (Table 8,9). Period of follow up was not adequate to have a correct assessment of recurrence rate.

References:

1. A Companion in surgical studies; Ian Aird ; 2nd edition 1957

2.Da-silva al, Patroiaanu A. Incisional hernias; factor influencing development. South Med. J 1991; 84 : 1500-155.

3. Shaikh NA, Shaikh NM. Complaritive study of repair of incisional hernia. JPMA1994; 2:38 9.

4. Maingot,1964. Abdominal operations.9th edition.472-580

5. Luijeidik RW. A comparison of suture repair with mesh repair for incisional Hernia. New Eng J Med 2000;343(6):392-8.

6.Alexander HC, Prudden JF. The causes of abdominal wound disruption. Surg Gynecol Obstet 1966; 122:1223-9.

7. Richards PC, Balch CM, Aldrete JS. Abdominal wound closure A randomized prospective study of 571 patients comparing continuous vs interrupted suture technique. Ann Surg 1983; 197:238-43.

8.Copeland GP, Sagar P, Brennan J. Roberts, Cornford Patel. Risk-adjusted analysis of surgeon performance: a 1 year study. Br J Surg 1995; 82:408-11.

9.Santor TA, Roslyn JJ. Incisional hernia. Surg Clin North Am 1993; 73: 557-70.

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