

Original article:

Clinical study and management of Incisional hernia: A prospective observational study in Urban population

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Abstract

Background: Incisional Hernias are common complication of abdominal surgery. Depending on the risk factors Incisional Hernia can occur in 10 - 20 % of patients subjected to abdominal operations.

Methods: This prospective study was conducted in department of surgery at a tertiary care hospital for one year duration. All the patients, regardless of age and gender, admitted with diagnosis of incisional hernia were included in the study. Depending upon the size of defect treatment was carried out. Postoperatively patients were followed up for detection of possible complications and their treatment.

Results: 60 patients of incisional hernia were studied. Mean age was 49 years with male to female ratio 4.3:1 wound infection in the post-operative period was the commonest etiology .

Conclusions: Wound infection following previous surgery was the most important risk factor associated with incisional hernia.

Keywords: Incisional hernia, Mesh repair

Introduction:

Incisional hernia has followed abdominal surgery like a shadow for more than a century now. Incisional hernia is the one true iatrogenic hernia. Ian Aird defines incisional hernia as a diffuse extrusion of peritoneum and abdominal contents through a weak scar of an operation or accidental wound. Incisional hernia occurs in 10- 20 % of patients subjected to abdominal operations^{1,2}. Many factors are associated with incisional hernia like age, sex, obesity, chest infections, type of suture material used and most important wound infection¹. All these present a challenging problem to the surgeon. Incisional hernia usually starts early after surgery, as a result of failure of the lines of closure of the abdominal wall following laparotomy. If left unattended they tend to attain large size and cause discomfort to the patient or may lead to strangulation of abdominal contents. Further more, an incisional hernia can incarcerate, obstruct, perforate or can cause skin necrosis all of which markedly increase the risk to patient's life.

Material and methods :

The present study was hospital based Prospective, Observational study. This study was performed in the Department of Surgery for one year duration. The subjects were selected using random sample technique.

All the patients, regardless of age and gender, admitted with diagnosis of incisional hernia were included in the study. Depending upon the size of defect treatment was carried out. Postoperatively patients were followed up for detection of possible complications and their treatment.

Inclusion criteria:

- Pain and Discomfort at the site of swelling.
- Large Hernia with small opening and risk of strangulation.
- History of irreducibility, recurrent sub-acute intestinal obstruction, incarceration.
- Willing for cosmetic purposes.

Exclusion criteria included:

- Uncorrected extreme obesity.
- Skin infection.
- Ascites due to Cirrhosis, Heart Failure, Portal Hypertension, Pancreatic Cancer, Hepatitis, uremia.
- Bed ridden patient with wide defect.

Results:

60 patients of incisional hernia were studied.

Mean age was 49 years with male to female ratio 4.3:1 wound infection in the post-operative period was the commonest etiology .

Table 1) Patients involved with previous surgeries

previous surgeries Carried out	Number of patients (60)
Hysterectomy	12
Tubal legation	6
LSCS	7
Laparoscopy	5
Appendisectomy	18

Table 2) Risk factors

Risk factors	Number of patients (60)
Wound infection	8
Wound dehiscence	3
Obesity	3
Repeat surgery	1
Constipation	2

Discussion:

An **incisional hernia** is a type of **hernia** caused by an incompletely-healed surgical wound. Since median incisions in the **abdomen** are frequent for **abdominal exploratory surgery**, ventral incisional hernias are often also classified as **ventral hernias** due to their location. Not all ventral hernias are from incisions, as some may be caused by other trauma or congenital problems.

Complications after open or laparoscopic approaches to ventral or incisional hernia repair with mesh span a wide range of severity. Intraoperative injuries to the bowel are rare but may necessitate a change in the operative plan. Postoperative complications are comprised of those common to all general surgery, for example, thromboembolism and superficial surgical site infection, and are typically managed no differently. Unique to recovery from hernia surgery however can be increased pain after mesh placement, seroma related to large dissection planes, infections of the mesh, as well as pulmonary insufficiency due to changes or loss in abdominal domain. Laparoscopic approaches to ventral or incisional hernia have dramatically affected the morbidity of surgery but may introduce complications unique to that approach. More serious long-term complications include chronic pain, chronic mesh infections, as well as the rare, but highly morbid, enterocutaneous fistula involving mesh. Complications such as these, likely require revisional surgery for resolution.

A systematic review found that hernia repair without prosthetic mesh is associated with unsatisfactory recurrence rates of 12-54 %, whereas hernia repair with mesh results in recurrence rates of 2-36 %. It is now accepted that only the smallest (less than 3 cm) incisional hernia should be repaired by primary tissue approximation with sutures¹⁰. A population based study of 10 882 patients in the US found an increase in the frequency of synthetic mesh use from 35% in 1987 to 65% by 1999.

Incisional hernia represents a breakdown or loss of continuity of a fascial closure. These hernias are of particular concern not only for the high recurrence rates among them but also for the challenges that follow their repair. It is known to occur in 11-23% of laparotomies. With thorough patient evaluation, pre-operative skin preparation, meticulous operative technique, use of nonabsorbable sutures for musculo- aponeurotic tissue, use of suction drain, use of peri-operative broad spectrum antibiotics, nasogastric aspiration, early ambulation and chest physiotherapy, complication rates in our study were minimized.

Conclusions:

Wound infection following previous surgery was the most important risk factor associated with incisional hernia.

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