ORIGINAL RESEARCH PAPER

General Surgery

RETROSPECTIVE STUDY ON INCISIONAL HERNIA

KEY WORDS:

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ABSTRACT

An incisional hernia, or postoperative ventral hernia, is a bulge or protrusion that occurs near or directly along a prior abdominal surgical incision. Incisional hernia is a well-known long-term complication of abdominal surgery, with a reported incidence of 3.0–20.6% in association with midline incisions and 0–2.1% with lower transverse incisions. Most common presenting complaint was swelling followed by pain over the scar site .Repair of ventral hernias have always been a challenging procedure for the surgeons because of the distorted anatomy following previous surgery.

Aim and Objective: To study the incidence of incisional hernia, Male and female ratio, clinical presentation (elective or emergency),duration of the swelling, defect size, content ,previous surgical details including incisions, and post operative period, and present surgical treatment.

Materials and Methods : This is a retrospective study conducted at Department of General surgery, Thanjavur Medical College from June 2016 - Sep 2017

Inclusion Criteria: All patients with swelling at scar site with previous history of surgery at the same site were included in this study

Exclusion criteria: Patient with debilitating medical co morbidities, bed rideen patient with wide defect not suitable candidate for surgery.

Total of 35 patients were included in the study after satisfying inclusion and exclusion criteria. Analysis was done from the case records and findings noted in the proforma. All the cases were operated and complication during postoperative period were noted

Introduction:

Incisional hernia(IH) is defined by the European hernia society(EHS) as" any abdominal wall gap with or without a bulge in the area of postoperative scar perceptible or palpable by clinical examination or imaging"(.1) Incisional hernia can Occur after any type of surgical incision, whatever its site or size, even the incision of the laparoscope trocar can cause it. Incisional hernia is a well-known long-term complication of abdominal surgery, with a reported incidence of 3.0–20.6% in association with midline incisions and 0–2.1% with lower transverse incisions(2,3) Incisional hernia occurs due to biochemical failure of the acute fascial wound early in the healing process when wound tensile strength is very low or absent (days 0-30). It is during this time, when wound strength depends entirely on suture integrity, that recovering patients start returning to increased levels of activity and thereby place increasing loads across their acute wounds.

The risk factors for the development of incisional hernia include postoperative wound infection, postoperative wound dehiscence, emergency surgery, diabetes, obesity chronic obstructive lung disease smoking nutritional deficiencies.(4,5)

Type of incision, suture materials and the technique of closure of incision are also important factors. Midline abdominal incision has a higher risk for developing IH compared to transverse and oblique incisions (11%, 4.7% and 0.7% respectively (6,7). Surgeon experience, long operation time , and increased blood loss relaprotomy also increases the risk of IH.(8,9)

Studies have shown that about 2/3'd appear within the first five years and that at least another third appears 5-10year after operation. If left unattended they tend to attain large size and cause discomfort to the patient or may lead to strangulation of abdominal contents. Bowel may more often incarcerate in small hernias, whereas bowel obstruction due to adhesions in the hernial sac or the hernial orifice is more often encountered in large hernias. However, the hernia may not be obvious for days or even years. The presence of IH has an important impact on patients quality of life and body image

Analysis and Results :

It has been found that incisonal hernia is more common in female than males.

Total patients	35	Percentage
Male	1	3%
Female	34	97%

Presentation:

In our study, 7 cases(20%) presented as emergency with irreducible swelling and pain and 28 cases (80%) presented with swelling only.

Mode of presentation	No.of cases	percentage
Emergency	7	20
Elective	18	80

It was found that13 cases (37%) presented within 6 months, 8 cases between 6 months to 1 year. 10 cases (29%) reported between 1 – 5year duration and rest 4 cases(12%) presented more than 5 year duration

Duration	Cases	Percentage
Less than 6 months	13	37%
6months -1 year	8	22%
1yr -5yr	10	29%
More than 5 yrs	4	12%

From this study, incisional hernia is more common with gynecologial procedures, 23 cases (64%).out of which 22% each for hysterectomy and sterilization procedure and 20 % for LSCS.

Rest of the cases are laprotomy and appendicectomy cases

Past Surgical procedure	Cases	Percentage
TAH	8	22
STERILISATION	8	22
LSCS	7	20
APPENDICECTOMY	4	12
LAPROTOMY	3	9
MULITPLE LAPROTOMIES	5	15

60% case were operated with lower midline incision, 20 % cases were having midline incision and rest of the case with transverse, mcburneys, oblique incisions.

Incision	Cases	percentage
Lower midline	12	34%
Upper midline	4	12%
Midline	6	17%
Transverse	8	23%
Oblique	5	14%

The size of hernia defect was assessed preoperatively using usg abdomen.14(45%) patients had defects upto 2cm and 11 patients had defect size between 2to 5 cm.10 patients defect size was more than 5 cm

Defect size	Cases	Percentage
Less than 2cm	14	45%
2-5cm	11	31%
More than 5cm	10	24%

The hernia sac content was found to be preoperatively, 43 % omentum, 37%bowel, 17% both bowel and omentum.3% mesentry

Operative Procedure:
All the cases were operated, 28 cases were operated electively and 7 were taken for emergency laprotomy.

Anatomical repair in 10 cases
Mesh (onlay) repair in 19 cases
Mesh (inlay) repair in 1 case
Resection and anatomosis was done for 5 emergency cases

Complications:
No complications were noted in 31 cases and 4 cases had seroma formation and wound infection, which resolved with iv antibiotics and regular dressing

Discussion:
The incidence of incisional hernia following abdominal surgeries is 2 to 11%. In this study 97 % cases were in female population. This increased incidence could be due to multiple pregnancies leads to laxity of abdominal wall, obesity.

80% cases presented with swelling and 20 % cases reported to emergency department with features of irreducibilty and obstruction.

Majority of cases (59%) presented with one year of index surgery. In this study 20 patients had postoperative complications in the previous surgery like wound infection and wound dehiscence in 6 cases. 3 patients had cough and respiratory complications, 4 had constipation history, 7 patients was obese.

Preoperative USG found to have defect size more than 2 cm in 63% cases and the preoperatively contents was found to be omentum in 43% and bowel in 37% cases.

64 % cases were seen following gynaecological surgeries using lower midline and pfannstiel incision and reason could be due to poor wound healing due to obesity and lax abdominal wall and early return to routine works.

Regarding management, mesh repair is considered superior to anatomical repair. Proper patient evaluation, control of co 0morbidities, sterile procedures, meticulous operative techniques, non absorbable suture material, use of mesh, suction drain, antibiotics, chest physiotherapy can decrease the recurrence rate.

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