A STUDY ON INCISIONAL HERNIA FOLLOWING OBSTETRICS AND GYNAECOLOGICAL SURGERIES

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ABSTRACT

BACKGROUND

The term ventral hernia encompasses incisional, epigastric, paraumbilical, spigelian and traumatic hernias. This is a hernia that protrudes through defect in an abdominal wound. With evolution of modern surgery and rapid increase in the number of abdominal operations performed, incisional hernias have risen in frequency and this hernia seems to be more common in females following obstetric and gynaecological surgeries. This study undertaken to stress the problem of incisional hernias in females occurring after obstetric and gynaecological surgeries.

The aim of the study is to-

1. Study the incidence and prevalence of incisional hernias following obstetrics and gynaecological surgeries in KAPV Government Medical College, Tiruchirappalli.
2. Study aetiological factors for incisional hernia following obstetric and gynaecological surgeries.
3. Analyse preventive measures.
4. Analyse the problems in females, which led to incisional hernia.

MATERIALS AND METHODS

178 cases of incisional hernia admitted in KAPV Government Medical College, Tiruchirappalli, during the period of 2 years from June 2014 to May 2016. The cases analysed according to age, previous history, type of incision, suture material used and associated comorbidities.

RESULTS

Maximum age affected is between 50 to 59 years and with 10 years of surgery. Incidence more following LSCS with midline incision. Incidence more with the usage of absorbable suture material. Postoperative wound infection and anaemia were leading associated factors for incisional hernia.

CONCLUSION

The incidence of incisional hernia is more common in females especially in obese and multiparous woman. The incidence is more after LSCS and puerperal sterilisation. Onlay reinforced mesh repair using Prolene mesh have given good results. Prolene mesh appears to be best tolerated by body tissues. The use of closed suction drain have significantly reduced the postoperative wound infection.

KEYWORDS

Incisional Hernia, Mesh Repair, Anaemia, Wound Infection.

HOW TO CITE THIS ARTICLE: Ravikumar S, Sharon Rose WP, Uma D. A study on incisional hernia following obstetrics and gynaecological surgeries. J. Evid. Based Med. Healthc. 2016; 3(99), 5458-5460. DOI: 10.18410/jebmh/2016/1130

BACKGROUND

The term ventral hernia encompasses incisional, epigastric, paraumbilical, spigelian and traumatic hernias. Incisional hernias form the largest group of ventral hernias.[1] This is a hernia that protrudes through a defect in abdominal wound.[2]

Financial or Other, Competing Interest: None.
Submission 16-11-2016, Peer Review 23-12-2016,
Acceptance 05-12-2016, Published 09-12-2016.
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DOI: 10.18410/jebmh/2016/1130

Two additional conditions apply to an anterior abdominal wall that appears to have a hernia, but does not. They include eventration of anterior abdominal wall and diastasis recti. The anterior abdominal wall is a complex layering of muscles, aponeurosis and fascia. Every year, 4 to 5 million laparotomies are performed with hernia developing in 2 to 36%. Our study pertains to incisional hernias following obstetrics and gynaecological surgeries. Of these incisions, closure of midline abdominal incisions by continuous rapidly absorbable suture material results in higher rate of incisional hernia than did closure by either continuous slowly absorbable suture or non-absorbable suture. The highest incidence is seen with midline and transverse incisions. Laparoscopic port site hernias are not rare and occur at a

rate between 0.6 to 2.8% may also develop hernia defects in abdominal wall fascia.[3] Many factors are involved in development of incisional hernia, patient-related factors including obesity, diabetes mellitus, jaundice, hypoproteinaemia, anaemia, steroid use are all factors conductive to disruption of laparotomy wound.[4] Surgical factors are related to the type of incision, choice of suture material, method of wound closure[5] and postoperative factors including surgical site infection, which is most important independent risk factor.[6] The development of postoperative chest infection resulting in coughing and gross distension from paralytic ileus are important in both wound dehiscence and incisional hernia.[7] Ventral hernias are often noted by the patients as an abdominal bulge. They can be exacerbated by any action that raises intraabdominal pressure such as coughing, performing Valsalva manoeuvre, lifting weights or elevating heads or legs. Rest or reduction of the incarcerated hernias may offer temporary relief. Incisional hernias do not spontaneously heal or close and nearly all enlarge with time. In most patients, if they are an appropriate surgical candidate, the presence of hernia is an indication for repair, which avoids potentially dangerous complications like obstruction or strangulation. With evolution of modern surgery and rapid increase in number of abdominal operations performed, incisional hernia have risen in frequency and advanced from an inconsequential position to the front rank of hernia disturbances and this incisional hernia deems to be more common in females especially following obstetrics and gynaecological surgeries. Many of the current surgical text books and operative manuals do not give sufficient description of the subject. Most merely offer advice to reconstitute the abdominal wall in layers, restore normal anatomy or close gap with mesh with non-absorbable suture material. This study has been undertaken to stress the problem of incisional hernias in females, which is occurring more commonly after obstetrics and gynaecological surgeries.

AIM OF THE STUDY

1. To identify incidence and prevalence of incisional hernias following obstetrics and gynaecological surgeries in the Department of Surgery, KAPV Medical College, Tiruchirappalli.
2. To study the aetiological factors of incisional hernia following obstetrics and gynaecological surgery.
3. To analyse preventive measures.
4. To analyse problems in females, which has led to incisional hernia.

MATERIALS AND METHODS

In 178 cases of incisional hernias admitted to KAPV Medical College during period of 2 years from June 2014 to May 2016. The cases were analysed according to age, previous surgery, type of incision, suture material used, associated factors like anaemia, obesity, return to work, wound infection after the original surgery for a period of 2 years. Detailed clinical study was done giving much importance to the above said factors.

RESULTS

Age in Years	Cases	
	Number of Cases	%
Up to 30 years	23	12.92
30-39	52	29.21
40-49	33	18.53
50-59	57	32.02
60 and above	13	7.32
Total	**178**	**100**

Table 1. Age Distribution

Occurrence	Cases	
	Number of Cases	%
<1 year	61	34.3%
1-10 years	44	24.7%
>10 years	73	41.0%
Total	**178**	**100%**

Table 2. Time of Occurrences

Previous Surgery	Cases	
	Number of Cases	%
Hysterectomy	19	10.67
L.S.	26	14.60
L.S.C.S.	58	32.58
L.S.C.S. with sterilisation	31	17.41
P.S.	44	24.71
Total	**178**	**100**

Table 3. Previous Surgery Done

Type of Incision	Cases	
	Number of Cases	%
Midline	83	46.6
Transverse incision (P.S.)	59	33.3
Pfannenstiel	5	2.8
Post rite	12	6.7
R.P.M.	19	10.7
Total	**178**	**100**

Table 4. Type of Incision

Suture Material Used	Cases	
	Number of Cases	%
Catgut	65	36.53
Prolene	29	16.29
Vicryl	48	26.96
Data not available	36	20.22
Total	**178**	**100**

Table 5. Suture Material

Associated Factors	Cases	
	Number	%
Anaemia	38	21.3
Multipara	8	4.5
Obesity	22	12.4
Postoperative wound infection	42	23.6
Return to work earlier	30	16.9

Diabetes mellitus	5	2.8
No associated factors	31	17.4
Data not available	2	1.1
Total	**178**	**100**

Table 6. Associated Factors

DISCUSSION

In 178 cases of incisional hernia studied in KAPV Medical College, Tiruchirappalli, the maximum age incidence of incisional hernia in the present series has been 50 to 59 years (Table 1). This study shows the incisional hernia is more common in females following obstetrics and gynaecological surgeries after 10 years of surgery (Table 2). The incidence is more in females because of laxity of abdominal wall due to multiple pregnancies, anaemia and earlier return to household activities. In this study, most of incisional hernias occurred following LSCS with midline incision[8] and puerperal sterilisation with transverse incision with incidence of 46.6% and 33.3%, respectively (Table 3 and 4). Out of 178 cases, 42 patients had postoperative wound infection, 38 patients had anaemia at the time of previous surgery and 22 patients being obese[9] (Table 6). Out of 178 cases, anatomical repair was done for 13 patients. It involves overlapping layers of normal fascia and securing with a double row of mattress sutures. Relaxing incisions along the lateral rectus sheath reduce tension on the wound edges. Laparoscopic mesh repair was done for 5 patients and open mesh repair was done for 160 patients. The onlay technique involves primary closure of fascial defect and subsequent reinforcement by placing the mesh prosthesis on the top of the fascial repair. The mesh is secured to anterior rectus sheath. Diagnosis was made in all the patients by clinical examination alone without resort to any investigation. Onlay reinforced primary repair was done in all 160 cases. Closed suction drain catheters placed over mesh and brought through separate stab wounds remote from incision were used in all cases. Only 12 cases had mild seroma and one case had small haematoma, which responded to pressure dressings and abdominal corset application.

CONCLUSION

Incisional hernia is the second common type of hernia. The first being inguinal hernia. Incidence of incisional hernia is more common in females especially in obese and multiparous woman. The incidence is more common in the age group 50 to 59 years. The majority of incisional hernia presented to hospital were after 10 years of surgery. The incidence is more after LSCS and puerperal sterilisation and more after midline incision following LSCS. The incidence more common following usage of absorbable suture materials like catgut and Vicryl for closure, postoperative wound infection and anaemia were the leading associated factors for incisional hernia. Onlay reinforced primary repair using Prolene mesh in selected patients have given good results. Prolene mesh appears to be best tolerated by body tissues. The use of closed suction drains have significantly reduced the postoperative wound complications. Ventral hernia repair continues to evolve as new technologies and new techniques are developed. The search for ideal repair technique with low long-term recurrence rates is ongoing. Until ventral hernias can be prevented, surgical repair of hernias will remain an important issue for general surgeon.

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