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Case Series of Complicated Incisional Hernia

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***Abstract*- Background:** The incisional hernia can present in various clinical presentations which require emergency surgery for better outcome and survival. We want to share our experience in the management of incisional hernias.

Methods: 100 patients were treated for incisional hernias. All patients were treated with intraperitoneal mesh repair except patients with enterocutaeneous fistula, who were treated with anatomical repair. Observations were made with regards to presentation at the time of admission like skin necrosis, type of incision, obstruction and strangulation, enterocutaeneous fistula, post-operative complications, hospital stay and recurrence were also observed.

Results: In our series of 100 patients 42 were males and 58 were females. Sites of hernia were pfannenstiel incision in 30 patients, colostomy closure incision in 19 patients. 10 patients presented with skin necrosis, 25 patients presented with strangulation and obstruction and 19 patients presented with enterocutaeneous fistula. All patients were followed up for a period of 6 months after surgery, with recurrence seen in 2 patients.

Conclusion: The treatment of complicated incisional hernia by intraperitoneal method is preferred as it has less complications and less chances of recurrences. In cases with enterocutaeneous fistula where infection is already settled and anatomical repair is preferred to mesh repair.

I. Background

This article guides a stepwise walkthrough by Experts for writing a successful journal or a research paper starting from inception of ideas till their publications. Research papers are highly recognized in scholar fraternity and form a core part of PhD curriculum. Research scholars publish their research work in leading journals to complete their grades. In addition, the published research work also provides a big weight-age to get admissions in reputed varsity. Now, here we enlist the proven steps to publish the research paper in a journal.

Surgery performed for various hernias are the most common surgeries performed by any surgeon worldwide. Incisional hernia is a complication occurring after various abdominal surgeries at the operation site [1].

Risk factors for incisional hernia are age >45 years, male preponderance, BMI >25, associated with previous laparotomies [2]. The main aim of incisional hernia repair is tension free repair, thus the use of mesh decrease reoccurrence chances.

There are various modalities available for treatment of incisional hernias which vary depending on presentation, time of onset, patient's age; each has his own merits and demerits. The aim of this study was to report our experience in the treatment of incisional hernia.

II. Materials and Methods

A retrospective study was performed by studying the clinical history record and patient were evaluated for type of incision, skin necrosis, enterocutaeneous fistula, obstruction and strangulation, post-operative complications, hospital stay and recurrence.

100 patients were studied (42 males, 58 females); the patients were treated with intraperitoneal prolene mesh repair except in cases with enterocutaeneous fisula were treated with anatomical repair. Observations were made with regards to presentation at the time of admission and all cases were followed upto six months after discharging from hospital.

III. Results

Out of total 100 patients taken up for hernia repair 30 presented with hernia associated with pfannenstiel incision, 19 (4 females, 16 males) patients were of colostomy closure incision, rest were midline laparotomy incisions. 10 (4 females, 6 males) presented with Ulcerated skin with associated necrosis, 25 (10 females, 15 males) patient came with obstructed and strangulated incisional hernia. The surgical technique carried out was prolene mesh which was placed intraperitoneally. The mesh was fixed with non- absorbable sutures. The anatomical repair method was used for 16 (10 females, 6 males) cases presented with enterocutaneous fistula. (Table)

The complication noted was 4 wound suppuration, 3 wound hematomas, and 1 cutaneous necrosis and in six month follow up 2 reoccurrences were noticed (Illustration).

IV. Discussion

Incisional hernia is protrusion of viscera through defect at surgical scar. Common sites of incisional hernias are midline incision, lower transverse incisions in gynecological operations. They are also seen in different sites of incisions on anterior abdominal wall. Complications seen are cutaneous atrophy and necrosis, hernia sac thickening and adhesions, obstruction, strangulation, enterocutaeneous fistula. [3].

Hernia sac protrudes through the defect at the scar; it is situated in the subcutaneous tissue layer forming a cavity. Minor injuries to swelling leads to collection of small heamtomas. Stretching of the skin over the swelling leads to necrosis. Cavity can be obliterated preventing hematomas and edema by placing one or two subcutaneous drains.

Synthetic mesh is used commonly for the repair of incisional hernia. Mesh is secured between abdominal wall and peritoneum. [4, 5]. In large hernia, the defect is approximated

with suturing mesh between abdominal wall muscles and rectus sheath [6].

If abdominal wall cannot be sutured due to tissue loss, prosthesis is placed over abdominal contents suturing it to muscles.

This method minimizes dissection. The plane is open and allows easy placement of mesh [7, 8]. Complications like hematoma and seroma formation are reduced. Any infection occurring in the subcutaneous plane does not affect the mesh. The prosthesis adheres to the peritoneum and renders it inextensible, permitting no further herniation. The prosthesis in this plane cannot be dislodged or ruptured by intraabdominal pressure [9].

Mesh repair for incisional hernias using inlay technique is preferred in all cases except in cases where enterocutaeneous fistula is developed. Edematous fascial layer and tissue loss makes it difficult to anchor the mesh to abdominal wall. The sutures taken through the fascial layer cut through the fragile edematous tissue. Dissecting through the fascial layer becomes difficult leading to further tissue loss. Handling of the muscle, aponeurosis and fascia during dissection will lead to further edema of tissue [10]. This further leads to increase in the incidence of complications like secondary infection, dehiscence of incision.

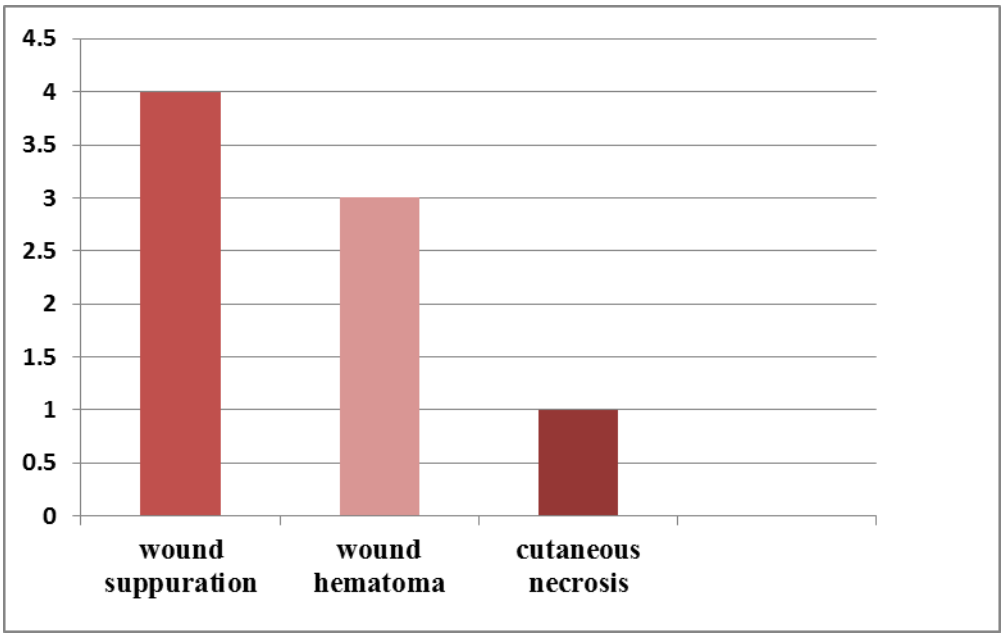
Trimming of tissue just before suturing, anatomical repair using absorbable suture material and healing of subcutaeneous tissue layer and skin by primary intension will reduce complications.

V. Conclusion

The treatment of complicated incisional hernias by intraperitoneal method is preferred as it has less complications and less chances of recurrences. In cases with enterocutaeneous fistula where infection is already settled and anatomical repair is preferred to mesh repair.

Table: Comparison of presentation in males and females:

Presentation	Female	Male	Total
Pfannestial incision	30	-	30
Colostomy closure incision	4	15	19
Skin Necrosis	4	6	10
Obstruction and strangulation	10	15	25
Enterocutaeneous fistula	10	6	16



DECLARATION

Author declare that there is no conflict of interest
There was no financial liability.

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