ABSTRACT

AIM OF THE STUDY

The objectives of this clinical study are

1. Critical evaluation of the cases of Incisional Hernia to trace the obvious etiological factors identifying the risk factors for Incisional hernia occurrence, such that these can be eliminated.

2. Compare and contrast the various surgical modalities and management procedures available to evolve at a consensus for effective management of such cases based on type and size of incisional hernia.

3. To discuss the Post operative complications in mesh repair and suture repair in incisional hernia.
MATERIALS AND METHODS

I. MATERIALS:

The study was a prospective study of 106 consecutive patients admitted with the diagnosis of incisional hernia in the Thanjavur medical college and hospital between September 2016 and October 2017.

Patients were considered eligible if they had an incisional hernia, defined as a palpable fascia or muscle defect at the site of a previous abdominal incision. Hernias were detected clinically and assessed by ultrasonography. Patients presenting in emergency with obstructed or strangulated incisional hernia are included.

Patients who were not fit for general anesthesia, with other general contraindications for laparotomy or laparoscopy and were not operated for repair of incisional hernia, Patient with collagen vascular disorder, young female patients who have not completed their family were excluded Thus 4 patients are excluded.

Patients with a hernial defect of less than 6cm in both the axis were included in Simple hernia group (no=57) who were subjected to Suture repair or Mesh repair or Preperitoneal MeshSublay.

Patients with a hernial defect of more than 6 cms in either horizontal or vertical axis or with multiple defects or recurrent incisional Hernia or with pathologically weak abdominal musculature assessed intraoperatively were included in ‘Complex’ hernia group (no=45) who were subjected to Mesh Onlayrepair orSublay repair or Autologous tissue repair as per the discretion of the surgeon.
Results of the various techniques were compared and the short term and long term outcome were measured. All the patients gave informed consent. The college ethics committee approved the study protocol.

METHODS

The Methods include obtaining information from the patient, thorough clinical examination and doing investigations necessary for management. All the information was entered in a proforma specially designed for this study. All the preoperative, peroperative, postoperative details and events were recorded. Outcome measures and data collection were done. He. All the outcome measures were analyzed statistically for significant difference between the treatment groups.
SUMMARY

The summary of the observations made in this study is as follows:

1. Of the 106 cases admitted in our hospital, 102 cases were included in the study of incisional hernia and the outcomes of various surgical techniques; out of which 57 cases were included in simple hernia group and 45 cases were included in the complex hernia group.

2. Incisional hernia was common in the age group of 30-50 years. The minimum age of occurrence being 22 years and the maximum age being 70 years.

3. Female patients constituted the majority % since gynecological causes were the most common Index operation performed (68.1%).

4. The commonest site of incisional hernia formation was following lower midline incision.

5. The commonest presentation was swelling alone in most of the patients, but pain over the swelling occurred in 21% of the patients and complications was found in 15.7% of the patients at the time of presentation.

6. The presentation of the incisional hernia occurred, within 6 months duration in 42.16% and in 31.3% of the patients it occurred late after 5 years.

7. The etiological factors identified among the patients with incisional hernia were probably wound related complications in about 50% of the patients, faulty techniques in 42.15%, comorbid conditions in 44.4% and undetermined in most of the patients.

8. Of the simple hernia, 39 patients underwent suture repair by various techniques and 18 patients underwent mesh repair by onlay technique in 13 patients and sublay technique in 5 patients and were followed up and compared or analysis.
9. Of the complex hernia, 31 patients underwent onlay mesh repair, 13 patients underwent sublay repair and by component separation technique in one patient and were followed up and compared for analysis. In general onlay repair was done in 44 patients and sublay repair was done in 8 patients and were compared for analysis.

10. Short-term clinical outcomes compared were length of operation and hospital stay. In simple hernia, the duration of the operation was the same for both the suture repair and mesh repair; but the hospital stay was significantly lower in suture repair group compared to mesh repair. On comparison between sublay and onlay group in both simple and complex hernia, both the duration of operation and the hospital stay were significantly lower in sublay repair.

11. Long term follow up at 6 weeks and 6 months were done and the clinical outcome measured were presence of pain and pain intensity, return full activity and quality of life outcome which also included cosmetic appearance.

12. The pain was present in significant number of patients with mesh repair compared to suture repair in a simple hernia group, but the long term follow up of return to full activity and quality of life were similar.

13. On comparison on sublay type and onlay type of mesh repair, the pain levels, return to daily activity and quality of life were significantly better sublay repair in both the simple and complex hernia.

14. The incidence of complications in suture repair was about 15.38% and in mesh repair it was about 23.07% which needed treatment in all the cases.
15. There was only one case of recurrence noted in the suture repair group during the study period, there was no statistical difference in recurrence rates between the suture repair and mesh repair in general.

16. In conclusion, onlay mesh repair of incisional hernia carried a high risk of infections and local wound related complications and pain in the current study. Therefore conventional suture techniques may still have a place in the repair of a small, simple incisional hernia.

17. In both the simple and complex incisional hernia, sublay technique in which mesh is placed in the retrorectus space is the most ideal repair technique.

The limitations of this study were as follows:

- There were no randomination of the patients done in this study
- It was limited in its validity due to small sample size and short follow up period.
- As it was an unblinded study, there was chance of observational bias.

1) The suggestion from this study was the need for a large randomized controlled trial comparing the sublay technique and onlay technique of mesh placement in incisional hernia repair.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BMI</td>
<td>Body Mass Index.</td>
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<tr>
<td>LSCS</td>
<td>Lower Segment Caesarian Section.</td>
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<tr>
<td>TAH</td>
<td>Trans Abdominal Hysterectomy.</td>
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<tr>
<td>BSO</td>
<td>Bilateral Salphingo Oopherectomy.</td>
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<tr>
<td>MTP</td>
<td>Medical Termination of Pregnancy.</td>
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<td>PS</td>
<td>Puerperal Sterilisation.</td>
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<td>DU</td>
<td>Duodenal Ulcer.</td>
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<td>PGJ</td>
<td>Posterior Gastro Jejunostomy</td>
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<tr>
<td>LML</td>
<td>Lower Midline</td>
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<tr>
<td>LAT</td>
<td>Lower Abdominal Transverse Incision</td>
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<tr>
<td>RPM</td>
<td>Right Para Median</td>
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