A COMPARATIVE EVALUATION OF DESARDA'S HERNIA REPAIR WITH LICHENSTEIN MESH REPAIR IN TREATMENT OF INGUINAL HERNIA

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Presentation on theme: "A COMPARATIVE EVALUATION OF DESARDA'S HERNIA REPAIR WITH LICHENSTEIN MESH REPAIR IN TREATMENT OF INGUINAL HERNIA Dr. Prasad Bansod* Dr. B. S. Gedam**— Presentation transcript:
INTRODUCTION
Inguinal hernia repair is one of the most frequent operation in general surgery[1] Successful surgical repair of hernia depends on a tension free closure of the hernia defect to attain the lowest possible recurrence rate[2,3] Modern techniques have improved the recurrence rates by placement of mesh over hernia defect or in the case of laparoscopic repair behind the hernia defect[2,3] Tension free closures have shown to cause significantly less pain and discomfort in the short-term postoperative period thus becoming increasingly popular [1,2,3]

More than 800,000 surgical repairs for inguinal hernias are performed in the United States.[4] Neither smoking nor alcohol use has been shown to affect hernia occurrence. Several studies have demonstrated that men who are overweight or obese have a lower risk of inguinal hernia than men of normal weight.[6,7] The sensitivity and specificity of the physical examination are 75% and 96%, respectively.[8]

Considering the conservative management, patient counselled on the symptoms of incarceration and strangulation, and to seek prompt evaluation if these occur[10,11] Patients with symptomatic, large, or recurrent hernias should be referred for repair, generally within one month of detection[12]

The choice of mesh material used in the repair is based on the surgeon's preference. Open repair may be particularly beneficial in older, less healthy patients.[14] Laparoscopic repair is usually reserved for recurrent or bilateral hernias. Open and laparoscopic techniques have similar results[15-18] Both procedures are effective if performed by an experienced surgeon, and have a recurrence rate from 0% to 9.4%.[19-20]

The most common complications of hernia repair are hematomas, including penile or scrotal ecchymosis; seromas; and wound infection. Chronic pain is most common long-term problem after hernia repair, occurring in 5% to 12% of patients, and is related to nerve scarification, mesh contraction etc.[21,22] The length of required inactivity varies greatly based on the surgeon's preference, but activity is usually permitted within two to four weeks for labourers and within 10 days as tolerated for professionals.[24-25] Treating hernia repair complications can be challenging, and are referred to the surgeon.[23]

AIMS & OBJECTIVES
Comparison of the outcomes primarily in terms of postoperative pain and recurrence. To compare the results in respect of general and local complications, returning to normal activity, foreign body sensations, discomfort and stiffness.

MATERIALS AND METHODS
Inclusion criteria
All patients with inguinal hernia. Patients with >18 years of age. Uncomplicated reducible or irreducible inguinal hernias; direct and indirect type; unilateral & bilateral.

Exclusion criteria: Patients not willing to participate in the study.
Age less than 18 years. Recurrent hernias. All complicated hernia i.e. strangulation, obstruction.

Institutional ethics committee permission.
Study design – Hospital based prospective and comparative study. Site – Dept. of General surgery of NKP SIMS and RC, Nagpur. Sample size – 115 patients. Study period – 2 years (with 1 year follow up)

All patients were given painkillers(Tb Diclofenac) till POD 3. Results and outcomes of Desarda's procedure were compared with Lichtenstein's procedure. All patients were given painkillers(Tb Diclofenac) till POD 3. Data collected as regards to postoperative pain, returning to basic and work activities, and complications. Return to normal activity described as the patient's ability to perform elementary activities
A COMPARATIVE EVALUATION OF DESARDA’S HERNIA REPAIR WITH LICHTENSTEIN MESH REPAIR IN TREATMENT OF INGUINAL HERNIA.

Patients followed up for one year at interval of one week, 1, 3, 6 and 12 month after discharge to note the complications and recurrence. Routine blood investigations and Anesthetics fitness taken.

Desarda’s Repair technique
Open inguinal canal
Blunt dissection and identification of sac

Desarda’s Repair technique
EOA Strip being created
EOA strip sutured down to inguinal canal

Desarda’s Repair technique
EOA upper strip sutured to muscles
EOA strip seen sutured

Desarda’s Repair technique
A tissue based tension free hernia repair technique. Strip of external oblique aponeurosis used for posterior wall strengthening, by suturing the superior lip with conjoint tendon and inferiorly with inguinal ligament. Physiological repair since no foreign body (Mesh) is used.

Lichtenstein mesh repair

RESULTS

AGE GROUP (YEARS) FREQUENCY N=115 PERCENTAGE

18-20 5 4.34%
21-30 20 17.39%
31-40 41-50 17 14.78%
51-60 26 22.60%
61-70 71-80 2 1.73%
>80 TOTAL NUMBER 115 100%
-MEAN: 47.37
-Standard Deviation:16.57

Age distribution: Mean age of the patients was 47
Age distribution: Mean age of the patients was 47.3 years, (Standard deviation 16.5)

DESARDA: (n=62) □ %
LICHTENSTEIN: (n=53) □ %

RIGHT SIDED HERNIA: 70 :: 60.86%
LEFT SIDED HERNIA: 37 · 32.17%
BILATERAL: 8 · 6.95%

DIRECT: (n=35) · 30.43%
INDIRECT: (n=77) · 66.95%

A total of 115 patients in the study
A total of 115 patients in the study. 62 patients in the Desarda (D group) and 53 Patients in the Lichtenstein's (L group,) comprising the two study arms.
Mean age in the study was 47.3 year.
The operative time required for both the techniques was almost same Mean 72.16min for Lichtenstein and min for Desarda. Its comparison was found to have no statistical significance.
Comparing the postoperative pain, D group had statistically significant outcome in pain relief, compared to L group

Patients of D group recovered earlier as compared to L group and the difference was found to be statistically significant.
One patient (1.61%) in the Desarda group had surgical site infection (SSI).
2 patients (3.77%) in Lichtenstein group had groin discomfort.
One patient (1.88% each) in Lichtenstein group developed Stiffness and chronic pain each.
These complications were found to have no statistical difference.

CORRELATIONS Sr. No Factors Frequency N = Mean SD P value 1.
Operative time
Lichtenstein
53
72.16
16.12
0.939
Desarda
62
71.93
16.93
2
Basic activities
(Time taken in days)
3.43
0.84
<0.001
2.62
0.85
3.
Work activities
8.67
2.11
0.0172
7.80
1.76

CORRELATIONS Sr. No Factors Frequency N = Mean SD P value 4.
Visual analogue scale
(POD 1)
Lichtenstein
53
2.67
0.47
0.0006
Desarda
62
2.32
0.59
5.
(POD 3)
1.58
0.63
0.0012
1.20
Scheffields pain Score

<table>
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<tr>
<th>Sr. No</th>
<th>Factors</th>
<th>Frequency</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>P value</th>
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<td>Scheffields pain Score (POD 1)</td>
<td>Lichtenstein</td>
<td>53</td>
<td>2.67</td>
<td>0.47</td>
<td>0.0006</td>
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<tr>
<td></td>
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<td>Desarda</td>
<td>62</td>
<td>2.32</td>
<td>0.59</td>
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<td>8.</td>
<td>(POD 3)</td>
<td>Lichtenstein</td>
<td>1.54</td>
<td>1.29</td>
<td>0.0012</td>
<td>0.63</td>
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<tr>
<td></td>
<td></td>
<td>Desarda</td>
<td>0.57</td>
<td>0.57</td>
<td>0.004</td>
<td>0.17</td>
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<tr>
<td>9.</td>
<td>(POD 7)</td>
<td>Lichtenstein</td>
<td>0.43</td>
<td>0.53</td>
<td>0.004</td>
<td>0.17</td>
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<td></td>
<td></td>
<td>Desarda</td>
<td>0.39</td>
<td>0.39</td>
<td>0.004</td>
<td>0.17</td>
</tr>
</tbody>
</table>

Sheffield scale:
0- no pain;
1- no pain at rest but it appears during movement;
2- temporary pain at rest and moderate during movement;
3- constant pain at rest and severe during movements.

Surgical site infection (SSI)

<table>
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<tr>
<th>Sr. No</th>
<th>Factors</th>
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<th>N</th>
<th>Complication seen</th>
<th>P value</th>
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<td>10.</td>
<td>Groin discomfort</td>
<td>Lichtenstein</td>
<td>53</td>
<td>2</td>
<td>0.210*</td>
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<tr>
<td></td>
<td></td>
<td>Desarda</td>
<td>62</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Stiffness</td>
<td>1</td>
<td>0.460*</td>
<td>12.</td>
<td>Chronic pain</td>
</tr>
</tbody>
</table>

- Abdominal Wall Hernia
  - Congenital or acquired
  - Potential for bowel obstruction
  - Incarceration
  - Strangulation
  - May suggest underlying pathology
    - Hepatic disease, BPH, COPD, obstructing colon mass

HERNIA SURGERY
Brandon H. Kilgore, MD, FACS

Hernias
Dr. Ibrahim Bashayesh RN, PhD

Abdominal Wall Hernia

By
Rachel, Xiao Xia, Helen

Breast Cancer
13. Surgical site infection (SSI)  
1.00*  
* Calculated by using Fischer exact test

28 DISCUSSION
The Desarda technique is original, new, and different from the historical methods, where a movable aponeurotic strip is considered more 'physiological' than the scar tissue produced around a synthetic prosthesis. The Lichtenstein technique and its modifications are widely practiced in the world but the complication rates of mesh and failures are more. Both the groups are statistically similar with regards to age. The Desarda method of hernia repair seems to be superior to the Lichtenstein method in terms of postoperative pain.

The time taken to ambulate the patient and the time taken for the patient to return to work are all significantly less in the new method compared to the Lichtenstein method. The complications observed were not statistically significant.

29 LIMITATIONS
The originally unhealthy tissue is used for the repair may lead to recurrence. Only one year follow up was done. Long term complications were not observed.

30 CONCLUSION
The results of inguinal hernia treatment with the Desarda technique are similar to the results after standard Lichtenstein operations over a 1-year follow up period. Postoperative pain is significantly less in Desarda technique. Patients after Desarda's operative procedure get ambulatory sooner as compared to the standard Lichtenstein mesh repair. Large-scale long term multi-centric trials need to be conducted to evaluate this repair further.

31 IMPLICATIONS
The technique has the potential to enlarge the number of tissue based methods available to treat groin hernias. The most evident indications for use of the Desarda technique include use in - young patients, contaminated surgical fields, financial constraints, a patient disagrees with the use of mesh.

32 REFERENCES
Scott NW, McCormack K, Graham P, Go PM, Ross SJ, Grant AM. - Cochrane Database Syst Rev - ; (4); CD002197

34 THANK YOU

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Objective

In Japan, laparoscopic inguinal herniorrhaphy (LHI) is not popular. We performed a retrospective study to evaluate the results of LIH in our hospital.

Patients

Between August 1992 and February 2008, 286 patients with 315 hernias were operated on at our department.