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Original Research Paper

General Surgery

A OBSERVATIONAL STUDY OF CLINICAL OUTCOMES IN PATIENTS UNDERGOING DESARDA TECHNIQUE VERSUS STANDARD LICHENSTEIN TENSION FREE MESH REPAIR IN INGUINAL HERNIA REPAIR

Dr. Yatish G Hegde	Department Of General Surgery , Kanachur Institute Of Medical Sciences, Mangaluru.
Dr. Kiran Kumar	Department Of General Surgery , Kanachur Institute Of Medical Sciences, Mangaluru.
Dr. Likhith M Rai	Department Of General Surgery , Kanachur Institute Of Medical Sciences, Mangaluru.
Dr Shivakumar J Jangamashetty	Department Of General Surgery , Kanachur Institute Of Medical Sciences, Mangaluru.
Dr Calvin Roby	Department Of General Surgery , Kanachur Institute Of Medical Sciences, Mangaluru.
Dr. Hind Noorudheen Mulla	Department Of General Surgery , Kanachur Institute Of Medical Sciences, Mangaluru.
Dr. Sanskriti R Chinya	Department Of General Surgery , Kanachur Institute Of Medical Sciences, Mangaluru.

KEYWORDS :

BACKGROUND:

- Desarda repair is based on concept of providing strong, mobile and physiologically dynamic posterior inguinal wall without use of any prosthesis.(1)
- In 1887, Edoardo Bassini first proposed repairing the inguinal canal with silk stitches suturing the conjoined tendon (arched fibre of transversus abdominis and internal oblique) to the inguinal ligament, which is the first sound technique for the repair of in guinal hernia.(2)
- Dr. Mohan P. Desarda reported a novel technique of a tissue-based anatomical herni are pair with very less recurrence and complication related to mesh repair.(3)

AIM AND OBJECTIVES:

1. Tostudytheshort-termoutcomewithrespectto:
- Post-operativepain
- Durationofstayinhospital
- Post-operativewoundinfectionrate

2. Recurrencerate

To look for any recurrence with regular follow up so none month, three months and at six months.

METHODS:

Detailed history was taken and patients were examined thoroughly. Patients will under gone cessary Base line investigations. Chest Xray and Electrocardiography if required.

Written informed consent were obtained from all the patient with detailed explanation of the procedure going to be performed on them the risks and complications involved and the advantages and disadvantages of the same. Primary outcome is post operative pain was calculated at post op3rd, 14th day, 1month, 3month by Sheffield scale for pain.

Grade0-*nopain,*

Grade 1-*no pain at rest but appears during movement*

Grade 2-*temporary pain at rest and during movement*

Grade3-*constantpainatrestandsevereduringmovement.*

Patient were asked to fill a proforma detailing all the study aims and objectives.

Method Of Collection Of Data:

A. Study design: Observation al study

B. Study period: March2022 to March 2023

C. Place of study: Patients presenting in General Surgery OPD/, referred cases of Inguinal hernia from other departments of Kanachur Institute of Medical Sciences Deralakatte, Mangalore.

SAMPLESIZE

Sample size calculation By using the formula:

$$n = \frac{(z\alpha + z\beta)^2 2SD^2}{MD^2}$$

Where

Z = Z statisticatal evel of significance

MD = Anticipated mean difference

SD = Anticipated Standard deviation

Statistical Analysis

Data was represented using Mean ± SD, and analyzed by Chi square test for association, comparison of means using t test, ANOVA and diagrammatic presentation.

Inclusion Criteria:

1. All patients with inguinal/inguino scrotal hernia.
2. Age18-70years
3. ASAI and II

Exclusion Criteria:

1. Hernia which is irreducible/ obstructed/ strangulated/ gangrenous/recurrentis not included in study.
2. Patients found thin, weak/ having anatomical defect in Externaloblique aponeurosis intraoperatively is excluded.
3. Patient who is medically unfit/having serious life-threatening illness/ untreated urinary obstruction/ cough /constipation is not included in study.

4. Immunocompromised patients.
5.UncontrolledDM/HTN,COPD.

RESULTS:

The present study was carried out at Department of General Surgery, Kanachur Institute of Medical Sciences, Mangalore.

Study Design: Observationalstudy

Total Subjects: A Total of **70** patients were enrolled in this study. They were randomised into two groups desarda and mesh

DESARDA:

This group included **35** patients in whom underwent repair using.

EXTERNAL OBLIQUEAPONEUROSIS– DESARDA'S Repair.

MESH: This group include **35**patients in whom Prolene MESH was used i.e. Underwent Lichtenstein's Procedure.

Evaluation of all patients included in the study with respect to history, physical findings, operative findings and postoperative complicationsin line with the predetermined objectives was done. Thirty-five patients underwent Desarda's repair and thirty-five patients underwent Lichtenstein mesh repair. All the patients in both groups were followed for a period of 6 months. The patients are followed up at one monthly, three monthly and six monthly intervals for any complications or recurrence.

*Desarda repair was performed according to the surgical technique described by Dr.Desarda and mesh prosthesis repair (Lichtenstein)was undertakenas described in the textbooks.

Figure1: Upper leaf of external oblique aponeurosis sutured to inguinal ligament.

Figure2: Stripofexternalobliqueaponeurosis sutured to the conjoint tendon.

Figure3: Both leaf of external oblique sutured with cord beneath.

The Observations made during the course of the study were as follows.

1. Distribution of patients according to Age(Years):

GENDER	MESH		DESARDA	
	No. Of Patients	Percentage	No. Of Patients	Percentage
MALE	35	100.0	35	100.0
FEMALE	35	100.0	35	100.0

2. Distribution of patients according to Gender

Age (Years)	MESH		DESARDA		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
<20	1	2.9	1	2.9	$\chi 2$= 13.780	P= 0.032
20-29	4	11.4	2	5.7		
30-39	1	2.9	12	34.3		
40-49	12	34.3	9	25.7		
50-59	6	17.1	5	14.3		
60-69	8	22.9	6	17.1		
70+	3	8.6	0	0		
TOTAL	35	100.0	35	100.0		

OUT COME ASSESSMENT:

Comparison Of Post Operative Pain:

1. Distribution of patients according Pain POD 1

Pain-POD1	MESH		DESARDA		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
0	0	0	0	0	X^2= 6.801	P= 0.00331 Sign
1	0	0	5	14.3		
2	17	48.6	19	54.3		
3	18	51.4	11	31.4		
Total	35	100	35	100		

2. Distribution of patients according Pain POD3

Pain-POD3	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
0	17	48.6	9	25.7	χ^2= 5.549	P= 0.0624 NS
1	17	48.6	21	60		
2	1	2.9	5	14.3		
3	0	0	0	0		
Total	35(100)	100	35(100)	100		

3. Distribution of patients according Pain POD14

Pain-POD14	Mesh		Desarda		Chi square test	Pvalue
	No.of patients	Percentage	No.of patients	Percentage		
0	25	71.4	27	77.1	X^2= 0.2991	P= 0.5844 NS
1	10	28.6	8	22.9		
2	0	0	0	0		

3	0	0	0	0		
Total	35	100	35	100		

4. Distribution of patients according Pain POD30

Pain-POD30	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
0	30	85.7	33	94.3	X^2= 10429	P= 0.2320 NS
1	5	14.3	2	5.7		
2	0	0	0	0		
3	0	0	0	0		
Total	35	100	35	100		

5. Distribution of patients according PainPOD90

Pain-POD90	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
0	30	85.7	34	97.1	X^2= 20917	P= 0.0877 NS
1	5	14.3	1	2.9		
2	0	0	0	0		
3	0	0	0	0		
Total	35	100	35	100		

6. Distributionof Patients According Pain POD 6 MONTHS (CHRONICPAIN)

Pain-POD6 months	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
0	30	85.7	34	97.1	X2= 2.917	P= 0.0877 NS
1	5	14.3	1	2.9		
2	0	0	0	0		
3	0	0	0	0		
Total	35	100	35	100		

7. Distribution Of Patients According ECCHYMOSIS

ECCHYMOSIS	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
Absent	33	94.3	34	97.1	X^2= 0.3483	P= 0.5551 NS
Present	2	5.7	1	2.9		
Total	35	100	35	100		

8. Distribution Of Patients According To HEMATOMA

HEMATOM A	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
Absent	33	94.3	34	97.1	X^2= 0.3483	P= 0.7708
Present	2	5.7	1	2.9		
Total	35	100	35	100		

9. Distribution of patients according to SURGICAL SITEINFECTION

Surgical Site Infection	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
Absent	34	97.1	34	97.1	X^2= 0.00	P=1.00 NS
Present	1	2.9	1	2.9		
Total	35	100	35	100		

10. Distribution Of Patients According To SEROMA

SEROMA	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
Absent	32	91.4	34	97.1	X^2= 1.061	P= 0.3031 NS
Present	3	8.6	1	2.9		
Total	35	100	35	100		

11. Distribution Of Patients According Post-operative Day Stay At Hospital

Stay at hospital in days	Mesh		Desarda		Chi square test	P value
	No. of patients	Percentage	No. of patients	Percentage		
2	2	5.7	5	14.3	X^2=	P=
3	5	14.3	15	42.9	14.149	0.0027
4	18	51.4	14	40.0		NS
5	10	28.6	1	2.9		
Total	35	100	35	100		

12. Distribution Of Patients According RECURRENCE

Recurrence	Mesh		Desarda		Chi square test	P value
	No.of patients	Percentage	No.of patients	Percentage		
Absent	34	97.1	34	97.1	X2= 0.00	P= 1.00 NS
Present	1	2.9	1	2.9		
Total	35	100	35	100		

CONCLUSION

The present study comparing Desarda's technique for hernia repair with Lichtenstein's meshre pair for in guinal hernia came out with the following conclusions:

Desarda's technique is a relatively easy technique to master and is easily reproducible.

Desarda'stechniqueisbestsuitedforyoungpatientsandforIndirect Hernias as it has less risk of post-operative orchitis, infertility and inguinodynia.

The postoperative pain is lesser with Desarda's technique on all post operative days and patients ambulate faster and get discharged faster with this technique than with mesh repair.

The risk of complications is roughly equalin both the procedures, however Desarda's technique is inherently free of risk of mesh infection as no prosthesis is used.

Desarda's technique is a very reasonable alternative to meshrepair in many clinical situations.

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