



A STUDY ON DESARDA TECHNIQUE FOR INGUINAL HERNIA REPAIR

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ABSTRACT **Introduction:** Mesh based repairs are associated with many complications, some of which are very dangerous. This has led investigators and surgeons to look into for tissue-based techniques, which are acceptable according to EHS guidelines. Desarda's repair is one such technique which was described in 2001. Desarda repair is a no tension mesh free tissue-based repair which is based on physiological principle. **Aims & Objectives:** To study Desarda Technique on inguinal hernia repair. **Patients And Methods:** A total of 50 patients were studied for 1 year period (2020-21), the outcome was measured in variables of Operative time taken, return to basic activity, Postoperative pain score on days 1,3,5,30, Hospital stay in days and for Complications like Infection, Hematoma, Orchitis, Seroma, Cord edema, Fever, Chronic groin pain and foreign body sensation. **Conclusion:** In Desarda technique; Operative time is less, post-operative pain is less and of shorter duration, post-operative complications are less, Chronic groin pain and foreign body sensation are minimal or absent and Early return to basic non strenuous activities is seen, Recurrence is less.

KEYWORDS : Desarda technique, Inguinal hernia repair, Complications

INTRODUCTION

Inguinal hernia is protrusion or bulging of abdominal contents through the inguinal canal. It is a common surgical problem worldwide. It's the commonest variant of hernia both in males and females, with higher incidence in males. Life time risk of developing Inguinal hernia is 27% in men and 3% in women and annual morbidity rates vary from 100-300 per 1,00,000 population based on the geographical location, hence causing a significant burden on the health infrastructure. Inguinal hernia thus causes a significant economic burden in the developing countries.

Surgery is the treatment of choice for Inguinal hernia. Currently, Lichtenstein mesh repair is the most commonly and accepted procedure done worldwide. Laparoscopic mesh repair of Inguinal hernia is also being increasingly performed. Shouldice technique is a tissue-based repair accepted as an alternative, but needs meticulous and extensive dissection. Mesh used in Lichtenstein and Laparoscopic repair is costly, causes foreign body reaction and is associated with numerous complications. Considering the above facts, new tissue-based repair techniques which are easy to perform and with low recurrence rates is the good choice for Inguinal hernia repair. Desarda repair is one such technique.

Even though Desarda technique was described in 2001, it is still not widely performed for Inguinal hernia repair. Present study aims to study the Desarda technique for inguinal hernia repair and its outcomes. Regionally, very few studies were published regarding Desarda technique. Hence, the present study is chosen.

OBJECTIVES:

1. To observe the per-operative (operative time, difficulties) problems of Desarda technique.
2. To observe the post-operative complications, complaints and problems of the Desarda technique.
3. To follow-up patients for at least 6 months for any recurrence.

PATIENTS AND METHODS:

Prospective Study done in 50 patients who underwent Inguinal Hernia repair by Desarda's Method in the Department of General Surgery, Sri Venkateswara Medical College and Sri Venkateswara Ramnarain Ruia Government General Hospital over a period of One year.

Inclusion Criteria: Patients above the age of 18 years with Inguinal hernia.

Exclusion Criteria: Patients over 60 years of age, Patients Associated with Recurrent Inguinal Hernia, Patients with Poor Musculature.

RESULTS:

- 26% (13) patients were aged between 18-30 years, 30% (15) were aged between 31-40 years and another 30% aged between 41-50; 14% people aged between 51-60 years.
- All patients in the study were males.
- Right sided inguinal hernias were 27 (54%) and left sided hernias were 23 (46%).
- Of the 50 inguinal hernias operated 36 were Indirect inguinal hernia (72%) , 12 were Direct inguinal hernia (24%) , 2 patients have Sliding hernia (4%).
- Of these, 26 patients of the 36 Indirect inguinal hernia are under the age of 40years, 9 were aged between 41-50 years, 1 was aged above 50 years.
- Of the 12 Direct inguinal hernias 6 were aged above 50 years, 6 were aged between 40-50 years.
- The 2 Sliding hernias were seen in patients aged between 18-40 years (1 in 18-30, 1 in 31-40 years group).
- 46/50 cases were operated within time range of 50-65 minutes. 2 cases were operated within 50 minutes and remaining 2 cases were operated beyond 65 minutes.
- Mean operative time for Indirect Inguinal hernias was 55.44min, for Direct inguinal hernias is 61.91min, for sliding hernias is 69.5min. Mean operative time in present study is 57.56 minutes.
- Further, mean operative time in the first half (first 25 cases) of the study is 60.16min, whereas this time has fallen to 54.96min.
- Mean hospital stay in Desarda's technique is less than 3 days. Most of the cases (45 patients; 90%) were discharged within 3 days of surgery. 5 cases (10%) had to stay beyond 3 days because of complications. Mean hospital stay in present study is 2.94 days.
- Pain was analysed using Visual Analogue Scale, on Post operative days 1,3,5 and day-30. On day-1; 33 patients had mild pain (66%), 17 had moderate pain (34%). On day-3; 25 patients had mild pain (50%), 11 had moderate pain (22%). On day-5; 9 patients had mild pain (18%), 6 patients had moderate pain (12%).
- Mean pain scores in present study on day-1 is 3.02, day-3 is 2.1 and day-5 is 0.96. No patient has shown pain on 30th day.
- Patients are observed for development of postoperative complications like Seroma, Infection, Hematoma, Orchitis, Testicular atrophy, Recurrence.
- Infection is seen in 2 patients; Seroma is seen in 1 patient and Hematoma in 1 patient. No Recurrence, Orchitis or Testicular

atrophy was observed in our study. No cases of Chronic groin pain were observed in our study.

- Most of the people returned to basic activity by day 3 itself. Some patients (9; 18%) took more than 3 days to return to basic activities. Mean number of days taken to return to basic activity is 2.22 days in the present study.

DISCUSSION:

Lichtenstein mesh repair is now the standard and most common procedure performed for Inguinal hernia repair. Cost of surgery and post-operative chronic groin pain are the important considerations in Lichtenstein mesh repair. Mesh is a foreign body, a simple piece of cloth prepared from polyester, polypropylene or similar synthetic threads. Therefore, its use in hernia repairs is known to cause all sorts of complications like pain, recurrence, infection, rejection, migration, testicular damage etc.¹

Usher and Newman were the real heroes of mesh. But people, back those days were reluctant to accept a foreign body to be implanted into the body. Lichtenstein made mesh popular, but later warned about mesh and its dangers. Millions of micro abscesses are formed and dense fibrous tissue is laid down in the pores of the mesh stitched in the inguinal canal. This is the main principle behind mesh implantation.

If the theory of defect in the collagen synthesis is accepted as claimed by many mesh proponents, then the mesh repair should be the worst affected technique due to this. Side effects of mesh repair are Distortion of anatomy, Muscle atrophy, Nerves, Vas and Vessels get engulfed and affected.

Dr. Mohan Desarda described a technique of repair of inguinal hernia by using a strip of External oblique aponeurosis Desarda technique is a tension free and mesh free, pure tissue inguinal hernia repair. Desarda repair takes care of all the drawbacks seen in both tension repairs and mesh repairs. Desarda technique is

- Easy to perform, even to residents and novice surgeons.
- Can be used to perform repair of all hernia types.
- Doesn't use any foreign body like mesh.
- Economical and cost effective.
- Doesn't require Hi-tech equipment.
- Low recurrence rate.
- Performed as day care surgery.
- Early post-operative recovery

Many studies showed that Desarda technique offers good results and offers better results than Lichtenstein repair regarding some aspects. Mean operative time in present study is 57.61 minutes. This time is comparable to the Mean operative time in studies of Youssef et al², Gedam et al³, Abbas et al⁴.

Post-operative pain was calculated using visual analogue scale in present study. Mean post-operative pain on day-1 is 3.02; on day-3 it is 2.1, day-5 it is 0.96. This data is comparable to studies by Szopinski et al⁵, Youssef et al², Gedam et al³, Abbas et al⁴, Bansod et al⁶ where the mean postoperative pain on day-1 was found to be around 2.4 to 3.3.

In present study 2 patients showed wound infection, 1 patient showed seroma and 1 patient showed hematoma. No case of fever, cord edema, orchitis, foreign body sensation, chronic groin pain were observed. This data is similar to other large studies like Desarda et al⁷, Szopinski et al⁵, Youssef et al², Gedam et al³, Abbas et al⁴ where complications were absent or minimal.

To return to basic activity, patients in present study took a mean time of 2.22 days. This is dependent on how a study defines Basic activity. Present study defined basic activity as the ability to perform day to day tasks that allow independent living. This data varied across standard studies depending 'How an author defined Basic activities?'. Hence this time is 1.2 days in Desarda et al, 3.9 days in Youssef et al, 2.5 days in Gedam et al, 24 hours in Szopinski et al. In Present study the value of mean time to return to Basic activity i.e., 2.22 days falls in between the above values.

After following up the patients to 6 months, no Recurrence was seen. This is similar to standard studies where Recurrence is either absent or minimal.

CONCLUSION:

- In this study of Desarda technique, the results are comparable to

other studies performed worldwide.

- In Desarda technique; Operative time is less. Post-operative pain is less and of shorter duration. Post-operative complications are less. Chronic groin pain and foreign body sensation are minimal or absent. Early return to basic non strenuous activities is seen. Recurrence is less

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