

# Inguinal Hernia Treatment: Comparative Study of Pre-peritoneal Approach and Darning Procedure

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## ABSTRACT

**Objective:** The objectives of the study are comparison of efficacy of Preperitoneal approach and Darning repair in patients with Inguinal Herni and also to compare the early recurrence in these procedures.

**Place and Duration of Study:** Surgical Unit II, Sir Ganga Ram Hospital Lahore. Duration of study was 6 months i.e 1<sup>st</sup> january to June 2010.

**Materials and Methods:** Patients from all age groups and both genders admitted through OPD (Male=45, Female=5). Prospective study using two procedures were adopted i.e Preperitoneal and Darning for the repair of Inguinal Hernias.

**Results:** A total of 50 patients were studied out of which 45 were male and 5 female. All of these were operated, 20 were repaired using Darning and 30 by Pre-peritoneal approach. It was found that there was one day difference in the hospital stay of the patients in both procedures. Early recurrence was only associated with 2 procedures and only related to defective technique/ inexperienced Surgeon particularly incases of Preperitoneal Approach.

## Conclusion

1. Preperitoneal Hernioplasty is much time consuming and has a high recurrence rate.
  2. Preperitoneal Hernioplasty should be reserved for recurrent Groin Hernias.
  3. Distal sack should be left in situ undisturbed to avoid neurovascular injuries and scrotal Hematoma.
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## INTRODUCTION

The word Hernia is a latin term that means rupture of a portion or structure. Preperitoneal approach for the treatment of Inguinal Hernia was first introduced by Cheatle in 1920. Nyhus in 1960 strongly recommended this technique for all types of groin hernias. The recurrence rate after conventional hernia repair through Inguinal approach is reported 10 to 30 % in different studies.

The tension free Hernia repair is to reduce the recurrence by Preperitoneal Inlay graft. This technique is anatomically, physiologically and mechanically more sound as compared to other procedures. The objective of preperitoneal Approach is Restoration of Posterior Lining of Inguinal Canal at the level of Fascia Transversalis and Transversus Abdominis Muscle. Complications Of preperitoneal approach seem to be very few and this procedure is associated with low morbidity and mortality.

The pre-peritoneal approach was described as the Inguinal Canal was not opened so there are less chances of postoperative Hernia.About 17% of the patients had more than single defect, Since 1/3<sup>rd</sup> of those defects are Femoral, so the

preperitoneal approach minimises the risk of incomplete operation. There are less chances of injury to Inguinal and genitofemoral nerves and less chances of scrotal hematoma formation.

Recurrence after Herniorrhaphy is one of the major morbidity enough to shake the confidence of surgeon. The recurrence rate after conventional herniorrhaphy is reported from 10 to 30 % in the literature.

## OBJECTIVE

The objectives of the study are

1. To Compare the efficacy of Preperitoneal approach with Darning repair in patients with Inguinal Hernia
2. To compare the incidence of early recurrence in two procedures.

## RESULTS

Following were the results obtained after prospective study was carried in 50 patients. Age group 15-50 =26% 13-25= 74%

Recurrence in 2 cases using Pre-peritoneal approach

Patients	Type of Hernia	Method of Repair	Type of Anesthesia	Hospital Stay
45male	Direct=8	Darning=20	General=25	Pre-Peritoneal= 3days
05 female	Indirect=40	Preperitoneal=30	Spinal=8	Darning=4 days
	Recurrent=2		Epidural=14	
			Spinal+Gen=3	

## DISCUSSION

Groin hernia occurs in 3 to 8% of the population and accounts for 12.5% of all the surgical patients. Inguinal herniorrhaphy is the most commonly performed operation in general surgery. In the presence of so many surgical procedures, still there is no agreement amongst the surgeons on best surgical procedure. Inguinal Hernias are usually operated through anterior approach, where the inguinal canal is opened before dealing with the sac. On the other hand, there is a group of surgeons who insist that posterior approach (Preperitoneal) is better technique than anterior approach. In the present series two cases of recurrence (8%) were observed after preperitoneal technique as compared to single case of recurrence during follow up period of one year. A marked difference in operation time was observed during both the procedures. In this present study time taken by the surgeon during Darning repair was between 35 minutes to 50 minutes (Mean 42.2 minutes) while time consumed during preperitoneal procedure was 60 to 90 minutes (Mean 75.8 minutes). The duration of hospital stay as mentioned in literature is 2 to 6 days after herniorrhaphy. The mean hospital stay of 2 to 9 days is reported after Shouldice and Darning Technique by King's North and others. In the present study most of the patients were managed to discharge 24 hrs after the operation either preperitoneal or Darning's Procedure. testicular atrophy is a sequelae of ischemic orchitis. Wantz reported 2.5 % incidence of ischemic orchitis leading to 0.6 % cases of testicular atrophy in a series after Primary herniorrhaphies. The incidence of testicular atrophy is as high as 5% after recurrent inguinal hernia repair. No single case of testicular atrophy was identified. Ilioinguinal, Genitofemoral and Iliohypogastric nerves lie in the region of groin in majority of individuals. In this study, Ilioinguinal nerve was transected in one patient during Darning repair in Recurrent Inguinal Hernia. The patient didn't experience any Sensory loss in the area of Groin postoperatively. The incidence of post operative pain is same in both cases.

## CONCLUSION

Results of preperitoneal hernioplasty are compared with those of Darning repair in this study. Preperitoneal hernioplasty is much time consuming procedure, carries high recurrence rate, requires wide dissection of the tissues and the surgeon should be much familiar with this technique. On the other hand Darning procedure is easy to perform for the repair of Primary inguinal hernias and it is less time consuming. It doesn't look wise to recommend preperitoneal repair for all type of groin H hernias. Posterior wall of the inguinal canal should be reinforced with a prosthetic mesh to avoid further recurrence rate after preperitoneal repair. Increased risk of neurovascular injuries and scrotal hematoma can be avoided by careful dissection and leaving the distal sac undisturbed in situ.

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