

Original Research Article

AN OBSERVATIONAL STUDY OF ELECTIVE DIVISION VS PRESERVATION OF ILIOINGUINAL NERVE TO REDUCE POST OPERATIVE PAIN IN INGUINAL HERNIOPLASTY

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ABSTRACT

Background: Inguinal hernia is one of the most common disease encountered in general surgery OPD. Various approaches have been used to treat inguinal hernia. But still Lichtenstein tension free hernioplasty is method of choice for inguinal hernia. Chronic post operative inguinal pain is major problem postoperatively in hernioplasty. Ilioinguinal nerve trauma during dissection, inflammation and entrapment by mesh may involve in pathogenesis of inguinodynia

Materials and Methods: This study was carried out in 100 patients between January 2024 to June 2024. In this study, we have included all the patients who underwent Lichtenstein tension free hernioplasty for inguinal hernia. Patients with obstructed inguinal hernia are excluded from the study. In the study, patients were randomly allocated in two groups: Group A(n=50) in which elective neurectomy was done and Group B(n=50) in which nerve preservation was done. In both the groups, postoperative pain assessment done on 1st POD, 7th POD and after 1 and 3 months by VAS(Visual analogue scale).

Results: the study shows that in group A and group B, there is no significant difference in VAS score in 1st and 7th post operative day. But in late Post operative period like 1 and 3 months, VAS score is significant low in group A patients than group B patients.

Conclusion: Elective ilioinguinal neurectomy significantly reduces pain in late postoperative period.

Keywords: Inguinal hernia, Lichtenstein Hernioplasty, ilioinguinal neurectomy, postoperative pain.

INTRODUCTION

Inguinal hernia is commonly encountered in general surgery opd. Despite laparoscopic hernia repair becoming popular today, Lichtenstein tension free mesh hernioplasty is commonly used for inguinal hernia repair.^[1]

Chronic postoperative inguinal pain or chronic inguinodynia is a major problem in inguinal hernia repair and it affect the daily activity of the patient. Pain may be due to intraoperative injury to nerves or nerves may be trapped in mesh or suture.^[2]

Many approaches used to treat postoperative chronic pain. It may be surgical or nonsurgical approach. Initially nonsurgical pharmacological treatment can

be given. But in nonrelaxing chronic pain surgical approach can be used like neurectomy or mesh removal.^[3]

Some surgeons recommended elective ilioinguinal neurectomy may help in reducing frequency of chronic postoperative groin pain. A major concern of chronic postoperative inguinal pain can be deal with simple ilioinguinal neurectomy.^[4]

Present study aims to evaluate the effect of elective division versus preservation of ilioinguinal nerve on post operative inguinal pain in Lichtenstein tension free inguinal hernioplasty.

MATERIALS AND METHODS

This study was conducted at tertiary care center, Surat Municipal Institute of medical education and research, surat. Sample was collected from January 2024 to June 2024 according to inclusion criteria.

Study population

All the patients who present with inguinal hernia who fulfilled inclusion criteria were taken as study population.

Inclusion Criteria

- Male patients
- Patients with age>18 years
- Patients with unilateral hernia

Exclusion Criteria

- Female patients
- Patients with age<18 years
- Congenital inguinal hernia
- Bilateral inguinal hernia
- Obstructed inguinal hernia

- Recurrent inguinal hernia

All patients who fulfilled inclusion criteria were divided into two groups:

In group A(n=50) patients, elective ilioinguinal neurectomy was done.

In group B(n=50) patients, ilioinguinal nerve preserved.

In elective ilioinguinal neurectomy, about 4 cm of ilioinguinal nerve was excised from deep ring.

Each group was evaluated for postoperative pain on POD 1,7 and then after postoperatively 1, 3 and 6 month by visual analogue scale.

Visual analogue scale represents a continuous range of value,^[1-10] on a horizontal line measuring 10 cm.

Data was collected and analyzed using chi square test.

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RESULTS

In our study we are evaluating post operative pain on 1st POD, 7th POD, 1, 3 6 month after surgery in group A and group B patients.

Pain (VAS) on 1st POD in group A and group B is described in table 1.

Table 1: Pain on 1st POD in group A and group B

VAS	Group A(n=50)	Group B(n=50)
0-3	25	23
3-6	22	23
>6	3	4

So there is no significant difference in group A and group B on POD 1

Pain (VAS) on 7th POD in group A and group B is described in table 2.

Table 2: Pain on 7th POD in group A and group B

VAS	Group A(n=50)	Group B(n=50)
0-3	48	44
3-6	2	4
>6	0	2

So there is no significant difference in group A and group B on POD 7

Pain after 1 month of surgery in group A and group B is described in table 3

Table 3: Pain after 1 month of surgery in group A and group B

VAS	Group A(n=50)	Group B(n=50)
0-3	49	45
3-6	1	3
>6	0	2

So in group B there is still 2 patients with >6 VAS score.

Pain after 3month of surgery in group A and group B is described in table 4

Table 4: Pain after 3month of surgery in group A and group B

VAS	Group A(n=50)	Group B(n=50)
0-3	50	46
3-6	0	3
>6	0	1

So in group B there is still 2 patients with VAS between 3-6 and 1 patients with >6 VAS score.

So, our study reveals that group A patients have significantly low chronic postoperative pain than group B. but in early postoperative period, there is

no significant difference in pain in group A and group B patients.

DISCUSSION

Chronic pain is a major problem after inguinal hernioplasty. Chronic postoperative inguinal pain can significantly affect the quality of life irrespective of severity of pain.^[5]

In Mui et al showed that there was no significant difference in both groups at 1 month. But at 6 month, incidence of groin pain was lower in neurectomy patients.^[5]

Dittrick et al showed that lower incidence of chronic groin pain with elective neurectomy during open inguinal hernioplasty.^[6]

Wantz GE, in large study of 546 patients showed that lower incidence of groin pain in patient with elective neurectomy as compared to control group.^[7]

However a RCT by Picchio et al revealed no difference in chronic groin pain in neurectomy patients as compared to control group.^[8] and neurectomy of ilioinguinal nerve was not associated with neurosensory disturbance.^[8]

Hsu et al also reported that no significant differences between the groups of neuronectomy and preservation of nerves for chronic groin pain or numbness.^[9]

Mui WL et al showed that elective ilioinguinal neuronectomy significantly reduced the incidence of chronic inguinal pain at 6 months after Lichtenstein hernioplasty without added morbidities.^[5]

Malekpour et al showed that pain on the 1st and 7th post operative day was significantly less in neuronectomy group.^[10]

In our study, it is observed that there is no significant difference in chronic postoperative inguinal pain in ilioinguinal neuronectomy group and preserved ilioinguinal nerve group on 1st and 7th postoperative days. But in late postoperative period i.e after 1 month and 3 month, chronic postoperative inguinal pain is significantly lower in ilioinguinal neuronectomy group than preserved ilioinguinal nerve group.

The limitation of this study is that it has not assess chronic pain in female inguinal hernia repair. It evaluate postoperative pain in general and not during specific condition like during rest or during minimal physical activity.

CONCLUSION

Elective ilioinguinalneuronectomy in inguinal hernioplasty significantly reduces chronic postoperative inguinal pain in late postoperative period as compared to preserved ilioinguinal nerve in inguinal hernioplasty.

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