

# **A comparison of open inguinal hernia surgery's elective ilioinguinal neurectomy and nerve preservation to determine the risk of chronic inguinodynia**

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**Abstract** - Among the procedures that are carried out the most frequently worldwide are inguinal hernia repairs. The contemporary methods used in hernia repair surgery have reduced recurrence rates to tolerable levels. However, a relatively recent complication known as post-operative persistent inguinal discomfort has been observed to be more prevalent than previously believed.

This has been assumed to be the result of the nerve being unintentionally injured during surgery or the nerve becoming entrapped (more frequently) in the postoperative fibrosis around the mesh.

As a result, conventional wisdom advised locating the nerve and keeping it out of the surgical area. However, it has been suggested that if the nerve were found and removed during the procedure, the postoperative Inguinodynia would be decreased. Therefore, an attempt is made to contrast the results of open inguinal hernia surgery vs elective preventive ilioinguinal neurectomy in terms of chronic Inguinodynia.

A time-limited prospective comparative study was conducted on patients who had uncomplicated direct and indirect inguinal hernias between May 2018 and September 2020 at the Dr. D. Y. Patil Medical College and Hospital in Pimpri, Pune, Maharashtra. The study included 60 consecutive cases of inguinal hernia that met the inclusion criteria, which included all male patients with direct and indirect inguinal hernias between the ages of 18 and 70.

At all three-time intervals, i.e., the first, third, and sixth postoperative months, there was a significant difference between the case and control groups (neurectomy versus nerve preservation group, respectively). Between the two groups, there was no discernible change in the postoperative paraesthesia criterion.

Between the two groups, there was no discernible difference in terms of the general, social, and physical well-being criteria.

**Introduction** - Inguinal Hernia surgeries are amongst the most commonly performed surgeries worldwide. Recurrence rates have come down to acceptable levels because of the modern techniques in the hernia repair surgeries. But a newer complication of post-operative chronic inguinal pain has been noticed to be increasingly common and its prevalence is found to be much more than previously thought. This has been thought to be because of the entrapment of ilioinguinal nerve (most commonly) in the postoperative fibrosis around the mesh or the nerve being accidentally damaged during the surgery. Hence traditional wisdom was to identify the nerve and keep it away from the operative field. But it has been proposed that the nerve, if identified and excised during the surgery, would lead to reduction in the postoperative Inguinodynia. Hence, an attempt is made here to compare the outcomes in terms of chronic Inguinodynia in elective prophylactic ilioinguinal neurectomy versus nerve preservation in open inguinal hernia repair

#### **Aims and objectives -**

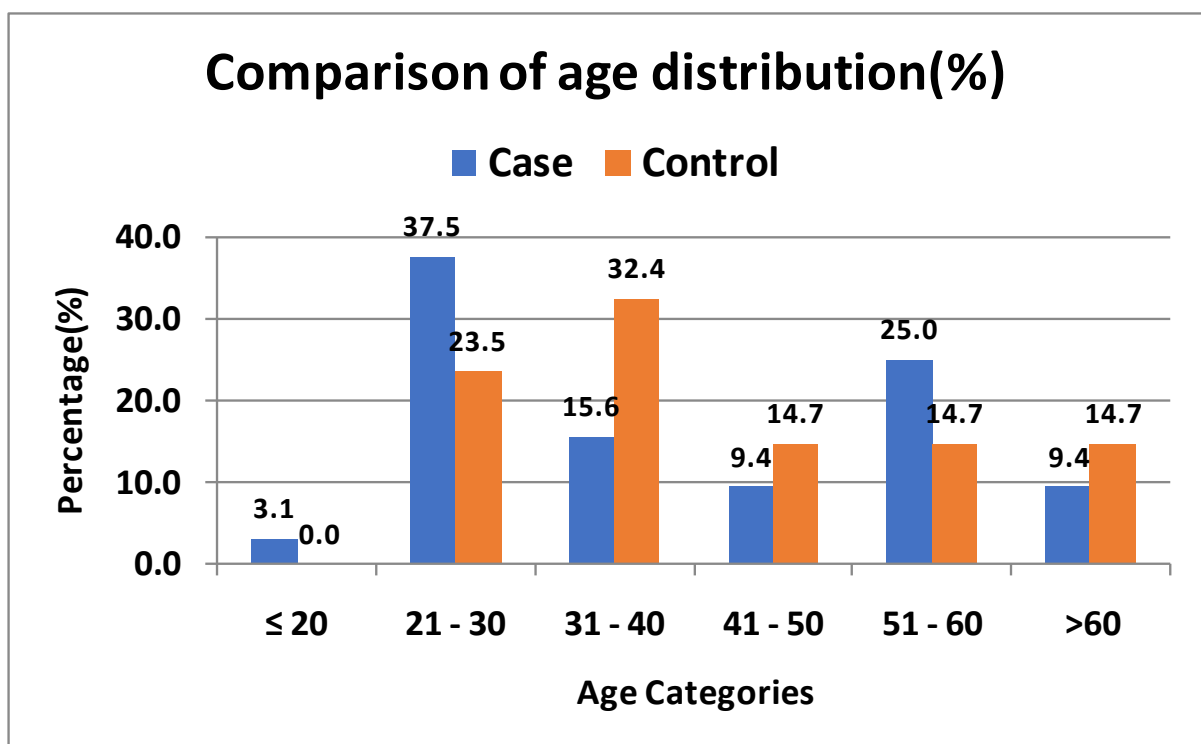
1. To compare and correlate the therapeutic effectiveness of routine Ilioinguinal neurectomy versus nerve preservation with respect to-
  - a. Post operative groin pain
  - b. Post operative paresthesia
  - c. Post operative patient satisfaction and well being
2. To arrive at a consensus concerning management of the Ilioinguinal nerve during hernia repair.

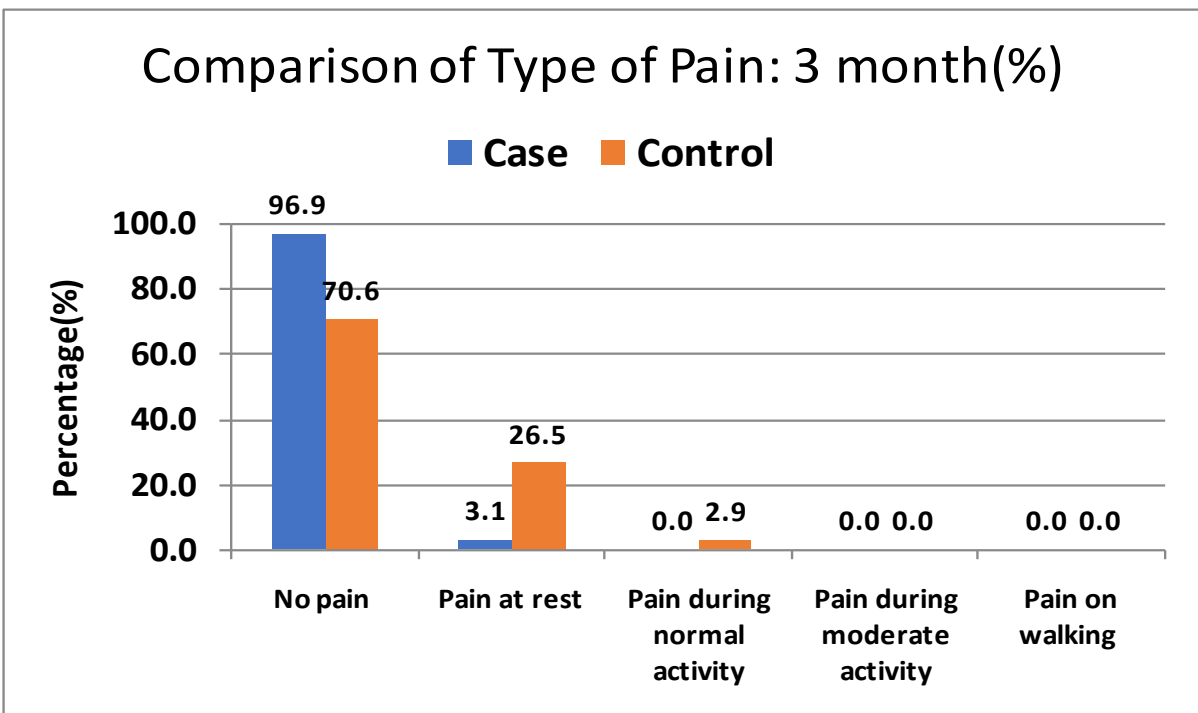
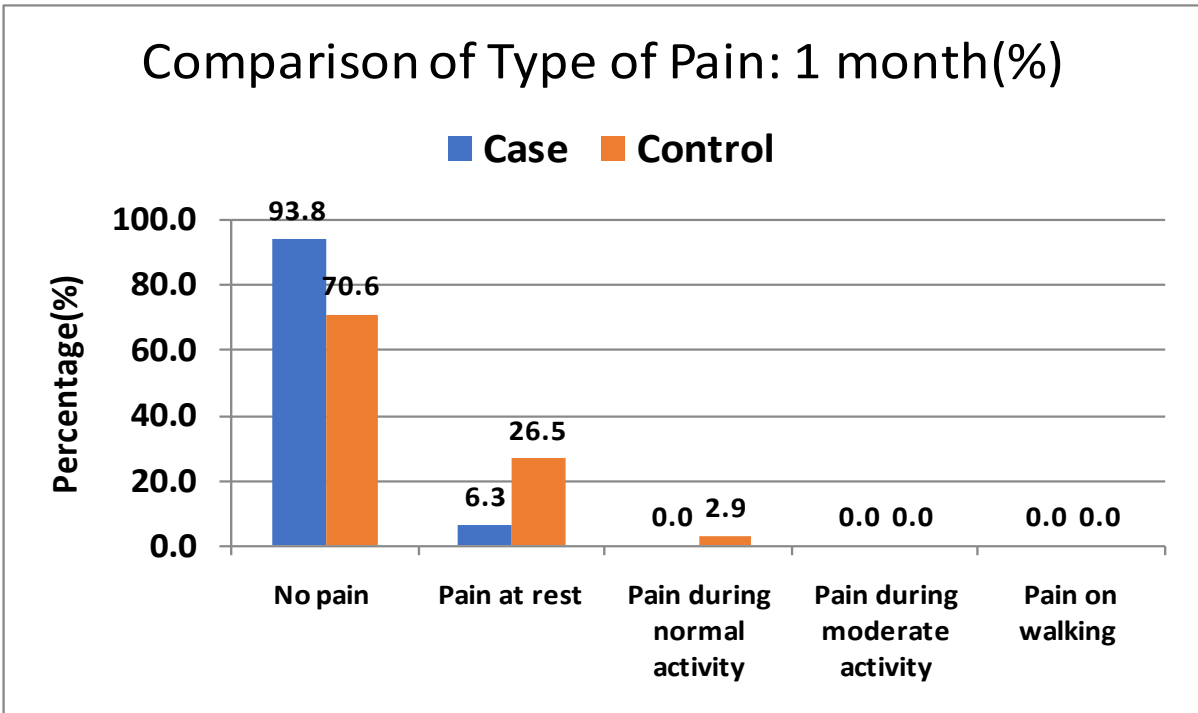
#### **Materials and Methods –**

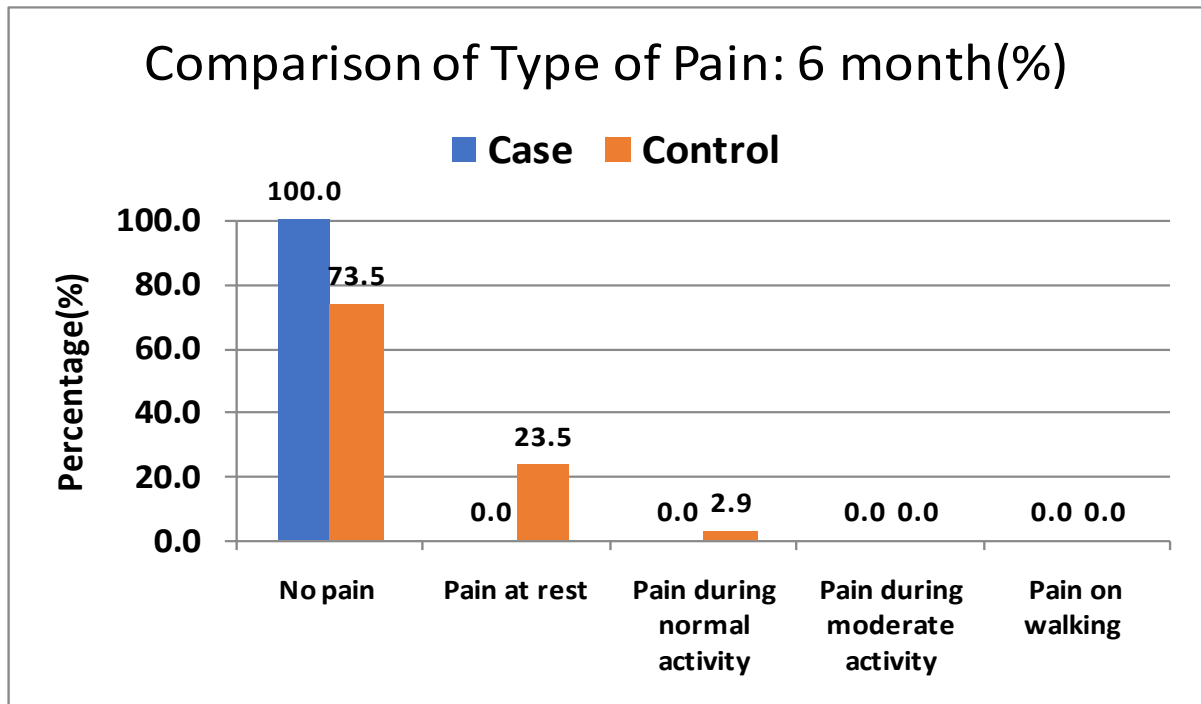
- **Type of study:** This was a time bound prospective comparative study in which patients presenting with uncomplicated indirect and direct inguinal hernia were taken up.
- **Place of study:** Department of General Surgery, Dr D. Y. Patil Medical College and Hospital, Pimpri, Pune, Maharashtra
- **Period of study:** May 2018 to September 2020
- **Sample size:** 60 Consecutive cases of Inguinal Hernia fulfilling inclusion criteria
- Inclusion criteria:
  - All male patients with direct and indirect inguinal hernia in the age group of 18 to 70 years posted for elective hernia repair were included in the study.
  - Patients who consented for the study.
- Exclusion criteria:
  - Irreducible or strangulated hernia
  - Recurrent hernia
  - History of previous lower abdominal incision
  - Patients medically unfit for surgery
  - Impaired cognitive function

- Limited mobility
- A written informed consent was taken from all patients before their inclusion in the study.
- Patients were divided into two groups, with 30 cases in each group on a random basis. Ilioinguinal nerve was identified in both the groups, with nerve being preserved in one group and neurectomy done in another group. The neurectomy specimens were sent for histopathological examination for confirmation.
- A pretexted proforma was used to collect relevant information from each individual patient selected at 1 month, 3 months and 6 months of surgery.

#### Observation and results







#### Discussion –

- Significant difference was found between the case and control groups (neurectomy versus nerve preservation group, respectively) on the criteria of postoperative inguinal pain at all three time points i.e., 1<sup>st</sup>, 3<sup>rd</sup> & 6<sup>th</sup> postoperative month.
- No significant difference was found between the two groups on the criteria of postoperative paraesthesia.
- No significant difference was found on the criteria of General, Social and Physical well-being between the two groups.

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