Journal of Cardiovascular Disease Research

ISSN:0975 -3583,0976-2833 VOL13, ISSUE 08, 2022

A COMPARISON OF OPEN INGUINAL HERNIA SURGERY'S ELECTIVE ILIOINGUINAL NEURECTOMY AND NERVE PRESERVATION TO DETERMINE THE RISK OF CHRONIC INGUINODYNIA

Author 1 – Dr Amit Girme (Assosciate Professor, Department of surgery)
Author 2 – Dr Digvijay Jadhav (Assistant professor, Department of general surgery)
Author 3* – Dr Ajinkya Dandawate (Resident, Department of general surgery)
Author 4 – Dr Rohit Dandawate (General Surgeon, Dr Dandawate Sushrut Hospital)
Author 5 – Dr Varsha Dandawate (General Surgeon, Dr Dandawate Sushrut Hospital)

CORRESPONDING AUTHOR
Dr Ajinkya Dandawate (Resident, Department of general surgery)
Email – ajinkyambbs95@gmail.com
Phone number – 9527290659

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-

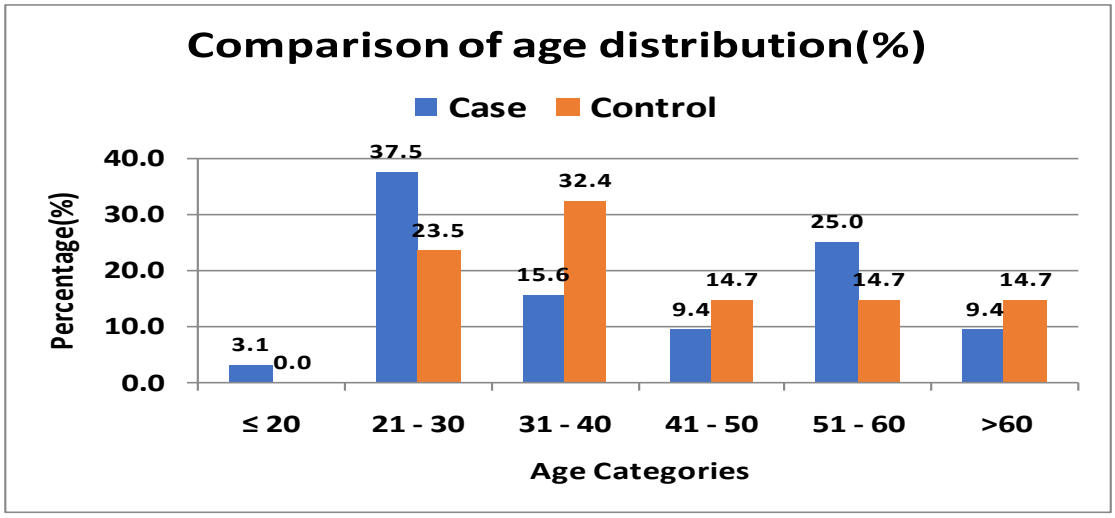
ISSN:0975 -3583,0976-2833 VOL13, ISSUE 08, 2022

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.

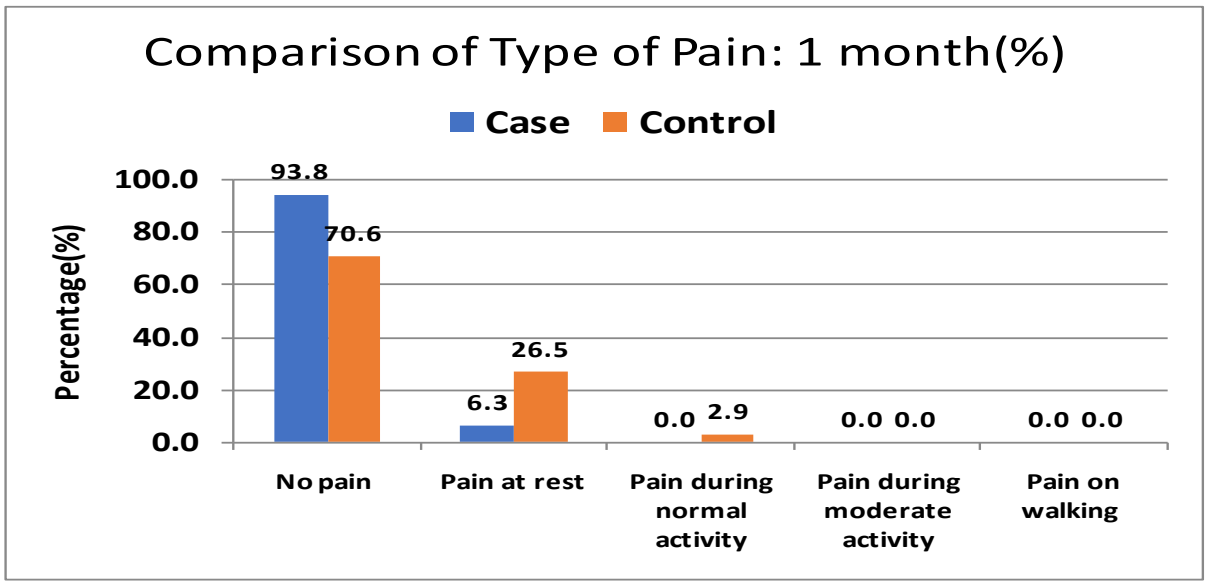
Materials and Methods –

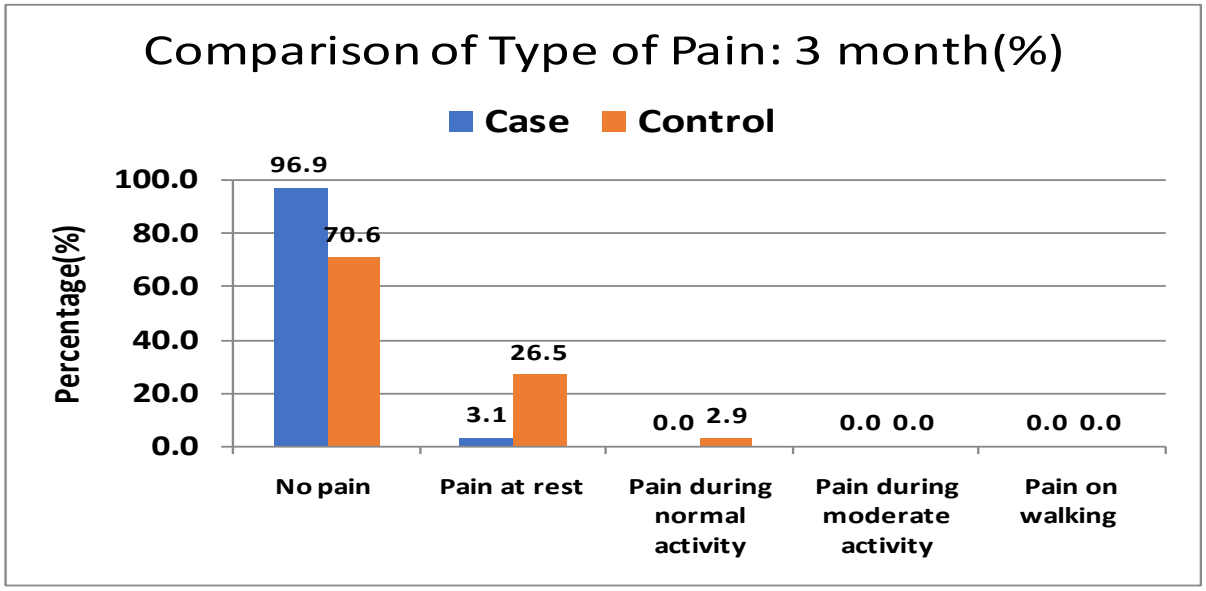
- **Type of study:** This was a time bound prospective comparative study in which patients presenting with uncomplicated indirect and direct inguinal hernia were taken up.
- **Place of study:** Department of General Surgery, Dr D. Y. Patil Medical College and Hospital, Pimpri, Pune, Maharashtra
- **Period 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.

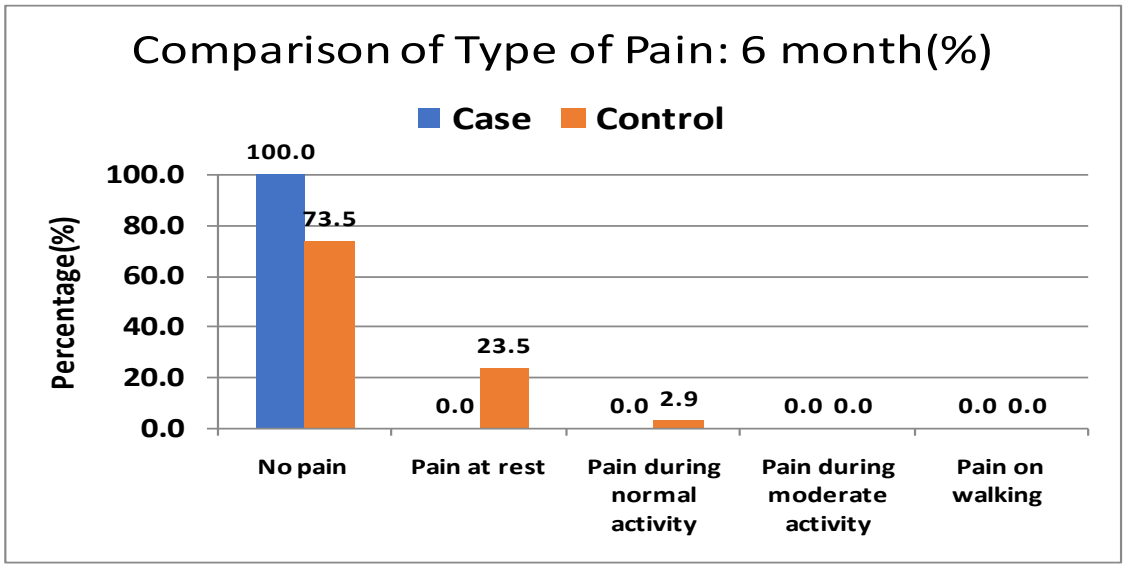
Observation and results



ISSN:0975 -3583,0976-2833 VOL13, ISSUE 08, 2022







ISSN:0975 -3583,0976-2833 VOL13, ISSUE 08, 2022

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., 1st, 3rd & 6th 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.

References :

1. Mui WL, Ng CS, Fung TM, Cheung FK, Wong CM, Ma TH, et al. Prophylactic ilioinguinal neurectomy in open inguinal hernia repair: a double-blind randomized controlled trial. Ann Surg. 2006;244:27-33.
2. Dittrick GW, Ridl K, Kuhn JA, McCarty TM. Routine ilioinguinal nerve excision in inguinal hernia repairs. Am J Surg. 2004;188(6):736-40.
3. Pratik Shah et al, A Comparative Study Between Prophylactic Ilioinguinal Neurectomy Versus Nerve Preservation in Lichenstein Tension-Free Meshplasty for Inguinal Hernia Repair, Indian Journal of Surgery
4. Khoshmohabat H, Panahi F, Alvandi AA, Mehrvarz Sh, Mohebi HA, Shams Koushki E. Effect of Ilioinguinal Neurectomy on ChronicPain following Herniorrhaphy. Trauma Mon.2012;17(3):323-8
5. 5. P. Amutha et al (IOSR-JDMS) Volume 16, Issue 7 Ver. X (July. 2017), PP 01-09 Comparative Study of Preservation Versus Elective Division of Ilioinguinal Nerve in Open Mesh Repair of Inguinal Hernia
6. 6. P Mahesh Kumar et al Indian Journal of Applied Research Volume-9 | Issue-3 | March-2019 Role of Ilioinguinal Neurectomy in entrapment syndrome in inguinal hernia repair in a tertiary care hospital
7. Mulkipatil SY et al. Int Surg J. 2017 Jan;4(1):209-213 Randomized control study of ilio-inguinal nerve preservation versus neurectomy in lichtenstein tension free mesh repair of inguinal hernia
8. 8. K. Saravanan, T. Umamaheswari et al Short term outcome of ilioinguinal neurectomy in reducing chronic pain after an inguinal hernia. International Journal of Contemporary Medicine Surgery and Radiology. 2019;4(1):A78-A80
9. 9. Sharif et al, Journal of the College of Physicians and Surgeons Pakistan 2019, Vol. 29 (5): 406-409
10. Omar et al Menoufia Med J 31:152–157 Effect of neurectomy versus ilioinguinal nerve preservation in the Lichtenstein tension-free hernioplasty of inguinal hernia
11. 11. Charalambous et al Incidence of chronic groin pain following open mesh inguinal hernia repair, and effect of elective division of the ilioinguinal nerve: meta-analysis of randomized controlled trials https://doi.org/10.1007/s10029-018-1753-9
12. 12. Hsu W, Chen CS, Lee HC, Liang HH, Kuo LJ, Wei PL et al. Preservation versus division of ilioinguinal nerve on open mesh repair of inguinal hernia: a meta-analysis of randomized controlled trials. World J Surg 2012;36(10):2311–2319