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## Role of flupirtine and diclofenac sodium in post inguinal hernia surgical pain

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### Abstract

**Aim:** The present study was undertaken to observe the role of flupirtine and diclofenac sodium in post inguinal hernia surgical pain.

**Materials and Methods:** The study recruited 40 patients who underwent inguinal hernia surgery of the age group of 30-60 years 20 and 50 yrs. Patients of either sex were recruited in the study. All participants underwent thorough physical examination. All measurements were performed using standard methods in the literature. Visual analog scale was used to assess pain score. Side effects if any were noted.

**Results:** Table no 1 presents the demographic data of participants. There was no significant difference in age between the two groups. There was no significant difference in height and weight of the two groups. Baseline pain scores were not significantly different between the two groups. Post intervention pain score was significantly lower in group 1 when compared with group 2.

**Conclusion:** The study results confirm that flupirtine was effective in the management of post surgical pain. Further detailed studies are recommended in this area.

**Keywords:** pain, surgery, flupirtine, diclofenac

### Introduction

Management of post surgical pain is the most essential part in clinical setting. If the pain is managed effectively, there will be comfort to the patient and quality of life also improves <sup>[1]</sup>. Further, there will be less complications to cardiac and respiratory systems. Effective pain management also speed up the recovery of the patient <sup>[2]</sup>. Also it decreases the cost of the treatment. Most common drugs that are used in the management of pain are NSAIDS but they are associated with side effects. The side effects are gastric disorders, liver disorders and even failure of kidneys <sup>[3]</sup>. These side effects limit the use of NSAIDS use for long term <sup>[3]</sup>. Flupirtine is an effective analgesic that acts centrally and is associated with minimum side effects. It does not cause sedation and also do not depress the respiration <sup>[4]</sup>. The present study was undertaken to observe the role of flupirtine and diclofenac sodium in post inguinal hernia surgical pain.

### Materials and Methods

**Study design:** Observational study

**Sampling method:** Convenient sampling

**Study population:** The study recruited 40 patients who underwent inguinal hernia surgery of the age group of 30-60 years 20 and 50 yrs. Patients of either sex were recruited in the study. Informed consent was obtained from all the participants and confidentiality of data was maintained. Patients with severe complications were excluded from the study. Unwilling participants were excluded from the study. After recruiting, the participants were randomly assigned into two groups with 20 participants in each group.

Group 1 (n=20): Tab flupirtine 100mg was administered

Group 2 (n=20): Tab diclofenac sodium 50mg was administered

**Data collection:** All participants underwent thorough physical examination. All measurements were performed using standard methods in the literature <sup>[5]</sup>. Visual analog scale was used to assess pain score. Side effects if any were noted.

**Ethical considerations:** The study proposal was approved by the institutional ethics committee after satisfying the queries adequately. The study followed all the guidelines as per the ICMR guidelines. Written informed consent was obtained from all the parents of the participants before

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the commencement of the study. Information related to the patients was kept confidential.

**Data analysis:** The statistical software SPSS 18.0 version was used to analyze the data. The significance of difference was tested using the student t test. The probability value less than 0.05 were considered significant.

## Results

Table no 1 presents the demographic data of participants. There was no significant difference in age between the two groups. There was no significant difference in height and weight of the two groups. Baseline pain scores were not significantly different between the two groups. Post intervention pain score was significantly lower in group 1 when compared with group 2.

**Table 1:** Demographic data of participants

Refractive error	Group 1 (n=20)	Group 2 (n=20)	P value
Age (years)	32±9	34±6	0.4135
Gender (M:F)	8:12	9:11	
Weight (kg)	61±3.6	58±7.3	0.1075
Height (cm)	158±8.24	156±9.54	0.4823

Data was presented as mean and SD

**Table 2:** Baseline and post intervention pain score of the participants

Parameters	Group 1 (n=20)	Group 2 (n=20)	P value
Baseline pain score	5±2.1	6±1.4	0.0844
Post intervention pain score	2±0.33	3±1.22	0.0011**

Data was presented as mean and SD. (\*\*P value less than 0.01 was significant)

## Discussion

The present study was undertaken to observe the role of flupirtine and diclofenac sodium in post inguinal hernia surgical pain. There was no significant difference in age between the two groups. There was no significant difference in height and weight of the two groups. Baseline pain scores were not significantly different between the two groups. Post intervention pain score was significantly lower in group 1 when compared with group 2. Pain sensation is one of the most important sensation and non adaptive. It helps the individual to take adequate management strategies so that pain can be reduced. There are multiple drugs available for management of pain. But most of the pain management drugs are associated with side effects. One of the most prominent side effects is decrease in the rate of respiration [6]. Further they can cause toxic effects to cardiac and respiratory functions. Hence, there is a need for drug which is effective and with minimum side effects. Flupirtine is one such drug that has effective pain management and causes minimum side effects [7]. The present study results support this view as the pain score was significantly lower in group 1 when compared with group 2. Earlier studies reported that flupirtine was reported to reduce pain more effectively [8, 9]. In contrast, other studies reported that when administered with same dose, diclofenac is rapid and effective [10-12]. Another study reported that no significant side effects were observed followed by administration of flupirtine. The study agrees with this view as there were no significant side effects in the patients. As the study conducted at one centre, the results may not be generalized. Hence, further detailed studies are essential to support usage of flupirtine in the management of post surgical pain.

## Conclusion

The study results confirm that flupirtine was effective in the management of post surgical pain Further detailed studies are recommended in this area.

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**Conflicts of interest:** None declared

## References

- Mueller SG. Flupirtine in acute and chronic pain associated with muscle tenseness: results of a postmarket surveillance study. *Fortschr Med Orig* 2003;121:11-8.
- Ringe JD, Miethe D, Pittrow D, Wegscheider K. Analgesic efficacy of flupirtine in primary care of patients with osteoporosis related pain: a multivariate analysis. *Arzneimittelforschung* 2003;53:496-502.
- Naser SM, Sarkar N, Biswas A. Efficacy and safety of flupirtine maleate and tramadol hydrochloride in postoperative pain management-a prospective randomized double blinded study. *J Indian Med Assoc* 2012;110:158-60.
- Reithmuller WH. Flupirtine in the treatment of postoperative pain. *Postgrad Med J* 1987;63:61-6.
- Hodsman NB. The morphine sparing effects of diclofenac sodium following abdominal surgery. *Anaesthesia* 1987;9:1005-8.
- Scheef W. Analgesic efficacy and safety of oral flupirtine in the treatment of cancer pain. *Postgrad Med J* 1987;63:67-70.
- Million R, Finlay BR, Whittington JR. Clinical trial of flupirtine maleate in patients with migraine. *Curr Med Res Opin* 1984;9:204-12.
- Luben V, Muller H, Lobisch M, Worz R. Treatment of tumor pain with flupirtine: results of a double-blind study versus tramadol. *Fortschr Med* 1994;112:282-6.
- Kelly AM. Does the clinically significant difference in VAS pain score differ with age, gender or cause of pain? *Acad Emerg Med* 1998;5:1086-90.
- Todd KH. Clinical versus statistical significance in the assessment of pain relief. *Ann Emerg Med* 1996;27:439-41.
- Dhar S, Bitting RL, Rylova SN. Flupirtine blocks apoptosis in batten patient lymphoblasts and in human postmitotic CLN3 and CLN2 deficient neurons. *Ann Neurol* 2002;51:448-66.
- Luben V, Muller H, Lobisch M, Worz R. Treatment of tumor pain with flupirtine: results of a double blind study versus tramadol. *Fortschr Med* 1994;112:282-6.