



# PF: 237 A COMPARATIVE STUDY BETWEEN CONTINUOUS INFUSION ANALGESIA AND FIXED PATTERN IN POSTOPERATIVE PAIN CONTROL

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## INTRODUCTION

The effective control of postoperative pain has become an essential part of perioperative care in recent years. There is evidence that a proper pain control increases comfort and patient satisfaction and, additionally, helps to reduce postoperative morbidity and in some cases hospital stay.

The administration of analgesics with a fixed pattern (FPA) interval is commonly used to manage postoperative pain. Continuous infusion analgesia (CIA) with elastomeric pumps keeps constant blood plasma concentrations of drugs. These elastomeric pumps contain common painkillers used for postoperative pain control. The use of CIA could lead to better postoperative pain control.

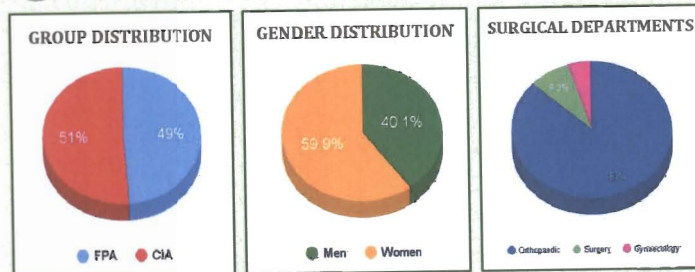
## AIM OF INVESTIGATION

To compare the effectiveness of two analgesic strategies in surgical patients with expected moderate or severe postoperative pain (Numeric Rating Scale [NRS] > 3): continuous infusion through elastomeric pump versus intravenous administration of the same analgesics at fixed intervals.

We conducted a prospective parallel analyst-blinded study. Patients were allocated in one of the following groups:

CIA GROUP Continuous infusion analgesia with an elastomeric pump	VS	FPA GROUP Fixed pattern analgesia group
dexketoprofen 400 mg + dipyron 16 g + ondansetron 24 mg + 0,9% saline infusion		dexketoprofen 50 t.i.d. + dipyron 2 g t.i.d. + ondansetron 4 mg t.i.d.
In a total volume of 120 mL during 60 hours		We followed a fixed pattern every 8 hours during the first 60 hours

## RESULTS



Data was collected from 192 patients of which 98 (51%) were allocated in the CIA group and 94 (49%) in the FPA group. There were no differences between groups.

The mean age was 70,73 years (SD=11,8). Gender distribution was 59,9% women and 40,1% men.

The surgeries were performed in 87% of the patients by the Orthopaedic and Trauma Department, 8,3% by the General Surgery Department and 4,7% by the Gynaecology Department.

## METHODS

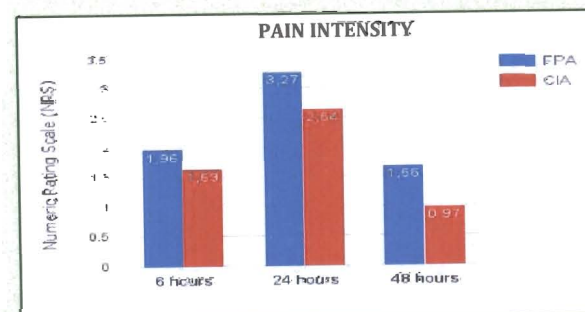
### OUTCOMES

The main outcome was the pain evaluated by NRS at 6, 24 and 48 hours after surgery. Secondary outcomes were the patients' comfort measured by the patient global impression (PGI) and adverse effects.

### STATISTICS

Statistical analyses were conducted using SPSS V.20.0 for Windows. A descriptive analysis was performed for continuous quantitative variables calculating mean and standard deviation. Percentages were calculated for qualitative variables.

Qualitative variables were analyzed with the Chi-square test. Student's t-test was used to compare quantitative variables. A p value of <0,05 was required for statistical significance.



Pain measured by NRS was significantly lower in CIA group at 24h (NRS=2,64 vs NRS=3,27; p=0,012) and at 48h (NRS=0,97 vs NRS=1,66; p=0,01).

Patients' comfort measured by PGI was significantly lower in CIA group with a p value <0,05.

There were no differences in adverse effects between groups.

## CONCLUSION

Post-surgery analgesia through a continuous infusion by an elastomeric pump helps to better control pain in patients with expected moderate or severe postoperative pain (NRS>3) than a fixed pattern of analgesia at 24 and 48 hours after surgery.

Furthermore, patients reported better global impression after the use of an elastomeric infusion of analgesics than the same painkillers administered in fixed pattern.

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