

Analgesic Effects of Paracetamol Compared to Morphine After Elective Laparotomy Surgeries

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Introduction

Opioids have been traditionally used for postoperative pain control, but they have some unpleasant side effects such as respiratory depression or nausea. Some other analgesic drugs like non-steroidal anti-inflammatory drugs (NSAIDs) are also being used for pain management due to their fewer side effects. The aim of our study was to compare the analgesic effects of paracetamol, an intravenous non-opioid analgesic and morphine infusion after elective laparotomy surgeries.

Materials and Methods

This randomized clinical study was performed on 157 ASA (American Society of Anesthesiology) I-II patients, who were scheduled for elective laparotomy in Firoozgar Hospital affiliated to Iran University of medical Sciences.

The patients were managed by general anesthesia with TIVA technique in both groups and 150 patients were analyzed (7 excluded). Paracetamol (4 g/24 hours) in group 1 and morphine (20 mg/24 hours) in group 2 were administered by infusion pump after surgery.

Postoperative pain evaluation was performed by visual analog scale (VAS) during several hours postoperatively. Meperidine was administered for patients complaining of pain with VAS > 3 and repeated if would be necessary.

Total doses of infused analgesics, were recorded following the surgery and compared. Analysis was performed on the basis of VAS findings and meperidine consumption.

Results

There were no differences in demographic data between two groups. Significant difference in pain score was found between the two groups, in the first eight hours following operation ($P = 0.004$), but not after 12 hours ($P = 0.14$).

The total dose of rescue drug (meperidine) and number of doses injected showed a meaningful difference between the two groups ($P = 0.008$). Patients in morphine group, experienced more nausea, vomiting and itching and there was significant difference between groups.

Conclusions

Paracetamol is not enough for postoperative pain relief in the first eight hour postoperatively, but it can reduce postoperative analgesic request and is efficient enough for pain management as morphine after the first eight hours following surgery.

Keywords

Paracetamol; Morphine; Acetaminophen ; Laparotomy; Pain

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