

# **Effect of adding ketorolac to intravenous morphine patient-controlled analgesia on bowel function in colorectal surgery patients – a prospective, randomized, double-blind study**

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摘要

## **Abstract**

**BACKGROUND:** Postoperative ileus (PI) is the transient impairment of bowel motility due to surgical trauma and the associated physiological responses. Postoperative ileus results in patient discomfort, increases gastrointestinal risks, prolongs hospital stay and increases medical expenses. In this study, we investigated the effect of patient-controlled analgesia (PCA) morphine with or without ketorolac on bowel functions in patients after colorectal surgeries. **METHODS:** A total of 79 patients who received elective colorectal resection were randomly allocated into two groups receiving either intravenous PCA morphine (M group) or intravenous PCA morphine plus ketorolac (K group). Recovery of bowel functions (bowel movement, passage of flatus, and soft diet intake), pain scores, morphine consumption, time for first ambulation, and opioid-related side-effects were recorded. **RESULTS:** Patients in the K group received 29% less morphine than patients in the M group with comparable pain scores. The first bowel movement (1.5 [0.7-1.9] vs. 1.7 [1.0-2.8] days,  $P < 0.05$ ) and the first ambulation (2.2 +/- 1.0 vs. 2.8 +/- 1.2 days,  $P < 0.05$ ) were significantly earlier in the K group than in the M group. The time of the first flatus passing, the first intake of soft diet, and duration of hospital stay were not significantly different between the two groups. **CONCLUSIONS:** The results of this study suggest that addition of ketorolac to intravenous morphine PCA provides an opioid-sparing effect but has limited benefit in shortening the duration of bowel immobility and time to first ambulation. These findings imply that postoperative ileus is attributable to multiple factors in addition to morphine consumption.