

PD-24. PREOPERATIVE ADMINISTRATION OF CONTROLLED-RELEASE OXYCODONE IN THE MANAGEMENT OF PAIN FOLLOWING LAPAROSCOPIC CHOLECYSTECTOMY

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Introduction: Although pain after laparoscopic cholecystectomy is less intense than after open cholecystectomy, most patients still experience significant discomfort. Uncontrolled pain may result in increased nausea, vomiting and or prolonged admission to hospital (1). Pre-emptive analgesia prevents nociceptive inputs generated during surgery from sensitizing central neurons and therefore reduces postoperative pain and analgesic requirements (2). Administration of opioids prior to surgical trauma may prevent the establishment of central sensitization and subsequent amplification of postoperative pain (3). OxyContin is a controlled-release preparation of oxycodone that maintains therapeutic opioid concentrations for a sustained period (4). We have previously demonstrated the efficacy of administering controlled-release oxycodone for ambulatory laparoscopic tubal ligation surgery (5). This study was designed to determine whether the preoperative administration of controlled-release (CR) oxycodone is an effective analgesic technique in the management of pain following laparoscopic cholecystectomy

Methods: Twenty patients were assigned to one of the two groups in a double-blinded, randomized manner. Group I (control) received an oral placebo tablet 1 hour prior to surgery. Group II (CR oxycodone) received an oral dose of controlled-release oxycodone 20 mg 1 hour prior to surgery. In the PACU, patients were assessed for pain, nausea, vomiting, and sedation. Patients were asked to quantify their pain on a verbal integer rating scale (VRS) between 0 and 10, with 0 representing no pain and 10 representing the worst imaginable pain. Patients were administered morphine 2 mg IV in the PACU and acetaminophen 325 mg/oxycodone 5 mg tablets every 4 hours PRN pain while on the surgical ward. The time to first analgesic requirement, 24-hour oral analgesic requirement (number of acetaminophen/oxycodone tablets) and level of pain and side effects were recorded. Demographic data, procedure duration, time to discharge, and analgesic duration were analyzed with analysis of variance. Nausea, vomiting, and sedation were analyzed using contingency analysis and the Chi Square test. Pain scores were analyzed using a Mann-Whitney U test. Significance was determined at the $P < 0.05$ level.

Results: There were no significant differences among the treatment groups with respect to age, height, weight and duration of surgery. There was no significant difference between the two groups in the incidence of nausea and vomiting or sedation. Time to discharge from PACU was shorter in the Control group (74 ± 20 min) vs CR oxycodone group (92 ± 48 min). There was a trend towards a longer time to first analgesic requirement in the CR oxycodone group (345 ± 540 min) and time to first acetaminophen/oxycodone use (833 ± 407 min) compared to the Control group (232 ± 448 min) and (718 ± 383 min) respectively. There was no difference in 24 hour acetaminophen/oxycodone use between the CR oxycodone group (3.6 ± 0.3) and the Control group (3.9 ± 0.3).

Conclusion: A single preoperative dose of CR oxycodone 20mg resulted in slightly longer PACU time, longer time to first analgesic requirement, without an increase in the incidence of nausea, vomiting, or sedation following laparoscopic cholecystectomy. We are currently enrolling further patients to determine significance in the analgesic efficacy of this technique.

1. *Anesth Analg* 2000;90:1234-5.

2. *Lancet* 1993;342:73-5.

3. *Anesth Analg* 1993;77:362-79.

4. *J Clin Pharmacol* 1996;36:595-603.

5. *Reg Anesth Pain Med* 2001;26:22.

Group	PACU time	Time to first analgesic (min)	Time to first acet/oxy (min)	24 h aceta/oxy (tabs)
Control	74 ± 20	232 ± 448	718 ± 383	3.9 ± 0.3
CR Oxycodone	92 ± 48	345 ± 540	833 ± 407	3.6 ± 0.3