44272 - DOES POSTOPERATIVE PAIN EXHIBIT DIURNAL VARIATION?

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INTRODUCTION: Previous postoperative investigations report morning peaks in analgesic administration. However, few have concurrently evaluated the diurnal variation of both pain and analgesic consumption.

METHODS: Local IRB approval was obtained for this study. This study describes the diurnal pattern of postoperative pain using pain intensity as well as analgesic consumption data from a recent placebo-controlled postoperative analgesic trial.

RESULTS: In the presence of patient-controlled analgesia with morphine, pain at 8pm was approximately 25-30% lower than at 8am on postoperative days 1 and 2. This temporal pattern was observed for static as well as dynamic pain measures and seen both with and without the co-administration of non-opioid analgesics. Nocturnal morphine use on postoperative day 1 was greater than subsequent daytime use on postoperative day 2. Nocturnal morphine use on postoperative day zero was not significantly different than subsequent daytime use on postoperative day 1.

DISCUSSION: Following surgery, evening pain appears to be 25-30% lower than morning pain. This pattern is not due to inadequate patient-controlled analgesia with morphine during sleeping hours but may be, in part, affected by general improvement in pain over time. Further work is needed to more clearly describe postoperative pain variation - especially during sleeping hours - and also to better understand neurohormonal and neurophysiological mechanisms of circadian pain variation after surgery.