

Predicting Postoperative Pain by Preoperative Pressure pain assessment

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摘要

Abstract

BACKGROUND: The goal of this study was to evaluate whether preoperative pressure pain sensitivity testing is predictive of postoperative surgical pain.

METHODS: Female subjects undergoing lower abdominal gynecologic surgery were studied. A pressure algometer was used preoperatively to determine the pressure pain threshold and tolerance. A visual analog scale (VAS) was used to assess postoperative pain. A State-Trait Anxiety Inventory was used to assess patients' anxiety. Subjects received intravenous patient-controlled analgesia for postoperative pain control. The preoperative pain threshold and tolerance were compared with the postoperative VAS pain score and morphine consumption.

RESULTS: Forty women were enrolled. Their preoperative pressure pain threshold and tolerance were 141 +/- 65 kPa and 223 +/- 62 kPa, respectively. The VAS pain score in the postanesthesia care unit and at 24 h postoperatively were 81 +/- 24 and 31 +/- 10, respectively. Highly anxious patients had higher VAS pain scores in the postanesthesia care unit ($P < 0.05$). Pressure pain tolerance was significantly correlated with the VAS at 24 h postoperatively ($P < 0.001$, $r = -0.52$). Pressure pain tolerance after fentanyl administration (mean, 272 +/- 68 kPa) correlated significantly with morphine consumption in the first 24 h postoperatively ($P < 0.002$, $r = -0.48$).

CONCLUSIONS: Assessment of preoperative pressure pain tolerance is significantly correlated with the level of postoperative pain. Pain tolerance assessment after fentanyl was administered and fentanyl sensitivity predicted the dose of analgesics used in the first 24 h after surgery. The algometer is thus a simple, useful tool for predicting postoperative pain and analgesic consumption.