


High-dose buprenorphine results in a greater occurrence of postoperative hyperthermia than morphine in a randomized clinical trial in cats undergoing ovariohysterectomy

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Resumen

OBJECTIVE To compare the thermoregulatory and analgesic effects of high-dose buprenorphine versus morphine in cats undergoing ovariohysterectomy. **ANIMALS** 94 client-owned cats. **PROCEDURES** Cats were randomized to receive either buprenorphine 0.24 mg/kg or morphine 0.1 mg/kg subcutaneously (SC) during recovery from ovariohysterectomy. Body temperature measurements were obtained before anesthesia, during anesthesia (averaged), at extubation, and 2, 4, and 16 to 20 hours postoperatively. Signs of pain were assessed, and demographic characteristics were compared between groups. The effects of treatment and time on body temperature, point prevalence of hyperthermia (> 39.2

°C), and pain scores were compared with linear or generalized mixed-effect models. RESULTS Cats receiving morphine (vs. buprenorphine) were older and heavier (both, $P \leq 0.005$). Other group characteristics did not differ between treatments. Cats receiving buprenorphine (vs. morphine) had higher postoperative temperatures ($P = 0.03$). At 2, 4, and 16 to 20 hours after extubation, the point prevalence of hyperthermia was greater ($P = 0.001$) for cats receiving buprenorphine (55% [26/47], 44% [21/47], and 62% [27/43], respectively) versus morphine (28% [13/46], 13% [6/46], and 47% [21/44], respectively). There were no differences in pain scores between groups or over time. Five cats receiving buprenorphine and 6 receiving morphine required rescue analgesia within the 24-hour period. CLINICAL RELEVANCE Administration of buprenorphine (0.24 mg/kg SC), compared with morphine (0.1 mg/kg SC), resulted in higher body temperatures without an apparent advantage with regard to analgesia during the first 20 postoperative hours than morphine. Opioid-induced postoperative hyperthermia could confound the diagnosis of fever from different sources.

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