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CAPITAL
LETTERS)A RANDOMIZED TRIAL TO EVALUATE EFFICACY AND COST
OF NALBUPHINE VERSUS MORPHINE IN WOMEN AFTER
PUBOVAGINAL SLING

Aims of Study: Recently mixed opioid agonist-antagonists have received increased attention for the management of postoperative pain. Nalbuphine is a semisynthetic drug (structurally related to both naloxone and oxymorphone) that has antagonist activity at the *mu* opioid receptor and agonist activity at the *kappa* opioid receptor. Nalbuphine appears to be more effective in relieving pain in women compared to men. The aim of this study was to evaluate the clinical efficacy, safety and cost of nalbuphine versus morphine in women after pubovaginal sling (PVS).

Methods: A randomized trial of women who underwent allograft fascia lata PVS between December 1997 and May 1998 was conducted. Patients were administered either intravenous nalbuphine or morphine 10 mg every three hours as needed for pain. We assessed postoperative pain using the verbal numerical scale (VNS), (0 = no pain, 10 = worst pain). We recorded patient age, weight, operative time and length of hospitalization. We also noted the total amount of opioid administered, its side effects and cost. Side effects included nausea/vomiting, pruritus, opioid tolerance and dysphoria. Statistical analysis included Wilcoxon rank sum test, Spearman's correlation and sample t-tests.

Results: A total of 45 consecutive women were entered into the study (22 nalbuphine and 23 morphine). Patients who were administered nalbuphine experienced significantly less pain than those who received morphine (median VNS of 1 vs 3, $p = <0.0076$). The side-effect profile was similar in both groups. There was no statistical difference between the two groups in age, weight, operative time, total amount of opioids used or length of hospitalization. The mean institutional cost of nalbuphine was 53% less than morphine (\$0.68/dose versus \$1.44/dose).

Conclusions: Nalbuphine was more effective than morphine in relieving postoperative pain in women after PVS with equivalent side effects and reduced institutional costs.