

PD-17. EFFICACY OF THE PERIOPERATIVE ADMINISTRATION OF VENLAFAXINE XR IN THE PREVENTION OF POSTMASTECTOMY PAIN SYNDROME

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Introduction: Postmastectomy pain syndrome (PMPS) is a neuropathic pain syndrome poorly documented, understood, and understudied. This syndrome consists of persistent pain in the anterior chest, axilla, medial and posterior parts of the arm following breast surgery. The incidence of PMPS following surgery for breast cancer is estimated at 20 to 30% (1-2). If poorly treated, patients may develop an immobilized arm, which can lead to severe lymphedema, frozen shoulder syndrome, and complex regional pain syndrome. Pharmacological therapy remains the initial treatment for PMPS (3). Preemptive analgesia has been shown to be efficacious in reducing postoperative pain (4), and the incidence of certain types of neuropathic pain syndromes (5). The preemptive administration of venlafaxine (an antidepressant), prior to the development of neuropathic pain, has been shown to be efficacious in reducing the incidence of neuropathic pain in the rat model (6). Venlafaxine inhibits the reuptake of serotonin and norepinephrine, with minimal muscarinic, histaminergic, and adrenergic activity. We believe that the perioperative administration of venlafaxine, may reduce the incidence of PMPS. Research involving the efficacy of venlafaxine in neuropathic pain in humans is lacking.

Materials and Methods: 80 patients scheduled for partial or total mastectomy with axillary dissection were included in this randomized, double-blind study. Patients were assigned to one of two groups: Group 1 (n=38) received venlafaxine 75 mg q hs for two weeks starting the night prior to surgery. Group 2, the control group (n=42), received a placebo for two weeks starting the night prior to surgery. Postoperatively pain scores were recorded utilizing a verbal analog scale (VAS) pain score from 0-10; 0 representing no pain and 10 the worst imaginable pain. Patients were administered patient-controlled analgesia (PCA) morphine for the first 24 h following surgery, and then 1-2 acetaminophen 325 mg/oxycodone 5 mg tablets for a VAS > 3. The 24-hour cumulative dose of morphine and acetaminophen/oxycodone was recorded. Pain scores were recorded at rest and movement (arm abduction to 90°) postoperatively on day 1, at 1 month, and at 6 months. At six months postoperatively, the presence of pain in the chest, arm, and axilla, edema, decreased sensation in the operative area, and phantom breast pain were recorded. Sensory disturbance was defined as diminished pinprick or thermal sensation on the operative side compared to the contralateral side. Edema was defined as the circumference of the arm on the operative side at least 2 cm greater than the preoperative circumference.

Results: There were no statistically significant differences observed between the two study groups with respect to age, height, weight, procedure, procedure time, adjuvant chemotherapy or radiation treatment. There was no significant difference in the 24-hour morphine use or postoperative acetaminophen/oxycodone use. Pain scores were similar at all postoperative time intervals. There was a significant decrease in the incidence of chest wall pain (28.7% vs 8.7%; P=0.002), arm pain (22.5% vs 8.7%; P=0.02) and axilla pain (26.5% vs 10%; P=0.01) between the control group and the venlafaxine group respectively. No significant differences were noted between the two groups with regards to edema, phantom pain or sensory changes.

Conclusion: The perioperative administration of venlafaxine beginning the night prior to surgery significantly reduces the incidence of post mastectomy pain syndrome in women having breast cancer surgery.

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