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: MAJOR VETERINARY SURGERY

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PREENUN JITASOMBUTI : COMPARISON OF ANALGESIC EFFECTS OF TRAMADOL HCl AND BUPIVACAINE HCl IN DOGS AFTER INTERCOSTAL THORACOTOMY. THESIS ADVISOR : ASSOC. PROF. MARISSAK

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A comparison of analgesic effects of Tramadol HCl and Bupivacaine HCl in dogs after intercostal thoracotomy between the 4th and 5th ribs was studied in 20 male mixed breed dogs. Ten dogs were locally injected with 0.5 ml. of Bupivacaine HCl to the 2nd, 3rd, 4th, 5th, and 6th intercostal nerves at the sites as proximal as possible. Each of other ten dogs was given an intravenous injection of 6 mg/kg Tramadol HCl immediately after thoracic closure. The following measurements were recorded preoperatively and postoperatively at 0, 2, 4, 6, 8, 10, and 24 hours : animal behavior; temperature; heart rate; respiratory rate; systolic, diastolic and mean blood pressures. Pain scores of all dogs were assessed from grading these measurements. Blood samples were taken from the femoral artery before thoracotomy and at 2 and 6 postoperative hours for blood gases measurement. The analgesic efficacy of Bupivacaine HCl is better than that of Tramadol HCl. Dogs treated with Bupivacaine HCl have lower means of pain scores at every time intervals except at 8 hours postoperation. However, the significant difference ($p < 0.05$) is observed only at the 4th postoperative hour. Dogs of the Bupivacaine HCl group have significantly higher mean heart rates observed before and 6 hours after surgery when compared with that of dogs of Tramadol HCl group. Dogs treated with Tramadol HCl have a significant higher mean systolic blood pressure measured immediately after surgery when compared with dogs treated with Bupivacaine HCl. Means of respiratory rates, diastolic blood pressures, mean blood pressures, PaO_2 , $PaCO_2$, HCO_3^- and pH of the two groups at every time intervals are not significantly different ($p > 0.05$).

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