

ETHANOL / MORPHINE / BLOOD PRESSURE / HEART RATE /  
RESPIRATORY RATE

Sirion Paijitpimuk : Combined Effects of Ethanol and Morphine on Blood Pressure, Heart Rate and Respiratory Rate in Dogs. Thesis Advisor : Associate Professor Ratree Sudsuang, Ph.D., Thesis Co-advisor : Associate Professor Prasan Dhumma-Upakorn, Ph.D. 73 pp. ISBN 974-584-820-4

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This study attempted to show the combined effects of ethanol and morphine on heart rate, respiratory rate and blood pressure in dogs. Ethanol alone in the dosage of 1 ml/kg B.W./min initially increased heart rate and respiratory rate within 5 min after infusion, then the rate gradually decreased. The results showed significant reduction of heart rate, respiratory rate and blood pressure and the average survival time was 57.5 min. Blood ethanol concentration was  $164.03 \pm 6.89$  mg %. Morphine injection alone in the dosage of 1 mg/kg B.W. produced a significant decrease in the heart rate, respiratory rate and blood pressure. The dogs average survival time was 70.5 min after injection. Urine morphine concentration was  $105.57 \pm 7.22$  ng/ml. Intravenous infusion of ethanol 1 ml/kg B.W./min combine with injection of morphine 1 mg/kg B.W. showed immediate reduction in heart rate, respiratory rate and blood pressure. The survival average time was 40 min which was shorter than those given ethanol or morphine alone. Blood ethanol concentration was  $126.84 \pm 12.6$  mg %, urine morphine concentration was  $75.74 \pm 7.57$  ng/ml which were lower than those given each agent alone. The present study suggested that the combination between ethanol and morphine may have additively or synergistically depressing effects on heart rate, respiratory rate and blood pressure.