

Evaluation of doxapram effects on cardiorespiratory parameters and quality of recovery from propofol induced and maintained anesthesia in dog

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Abstract

Many surgical complications and death is during anesthesia recovery. Accelerating the recovery process leads to lower problems due to rapid return to the physiological conditions. The aim of the present study was to evaluate doxapram effects on cardiorespiratory parameters and quality of recovery from propofol in dog. Twelve clinically healthy male mixed breed dogs were divided into two groups: control and treatment. All dogs were initially sedated by acepromazine. Thirty minutes later anesthesia was induced using propofol titration and maintained for 30 min using infusion of propofol. Immediately after propofol stoppage, 2 mg/kg doxapram was administrated intravenously in treatment group while, in control group, saline was administrated as same volume as doxapram. Heart rate, respiratory rate, rectal temperature, ET_{CO}₂, SpO₂, noninvasive blood pressure were measured at 30 min after sedative injection, 5, 10, 20, 30, 40, 50 min after induction of anesthesia and after complete recovery. Also, time of endotracheal extubation, time to first head lifting, time to first sternal recumbency, duration of recovery and quality of the recovery were measured. The main finding of this study was that doxapram, improves and hastens recovery about 30 min ($p < 0.05$). Other parameters of anesthesia quality were significantly better in treatment group ($p < 0.05$). Heart rate and blood pressure were increased significantly after doxapram injection, while ET_{CO}₂ significantly decreased compared with control group ($p < 0.05$). Results of this study showed that doxapram hastened recovery time following propofol anesthesia in dog.

Key words: Doxapram, Propofol, Recovery, Dog

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