

The Anaesthetic Effects of the Propofol Infusion with Butorphanol/Medetomidine, Acepromazine/Medetomidine and Acepromazine/Butorphanol in Puppies

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In the adult dog, the combined administration medetomidine 30 μ g/kg and propofol 0.2 mg/kg/min was known to provide a sufficient surgical anaesthesia. Compared with adults, the puppy has a different physiological condition. This study was performed to evaluate the anaesthetic effect of propofol infusion on puppies treated with various premedications

Fifteen dogs with a mean weight of 4.08 \pm 1.25 kg and with a mean age of 3-5 months were randomly assigned to 3 experimental groups. The dogs were premedicated with medetomidine (30 μ g/kg, IM)/butorphanol (0.2 mg/kg, IM) (BMP), acepromazine (0.05 mg/kg, IM)/medetomidine (AMP) or acepromazine/butorphanol (ABP). Anesthesia was induced with propofol (2 mg/kg, IV) slowly for 90 seconds, and maintained with propofol infusion (0.4 mg/kg/min). Arterial blood pressure, blood gas analysis, plasma propofol concentration, TPR, pedal withdrawal reflex, echocardiogram and recovery times were measured. All values were measured at before experiment and every 10 minutes after propofol infusion. The values in BMP were significantly higher than those in AMP, and the PCO₂ in the ABP were significantly lower than those in the other groups. All dogs in the BMP and the AMP showed no response to the pain stimulation since 10 minutes after propofol infusion. But, all dogs in the ABP, except one, did not reach the level of the surgical anaesthesia.

These results would suggest that the premedication with the acepromazine 0.05 mg/kg and medetomidine 30 μ g/kg, and propofol administration (2 mg/kg as a bolus and infusion rate of 0.4 mg/kg/min) was suitable anaesthetic method in puppies.

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