

The hematological and cardiopulmonary effects of epidural xylazine, lidocaine and their combinations in acepromazine sedated dogs

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Abstract

A study was carried out to compare the effects of epidural xylazine, lidocaine and their combination on hematological and cardiopulmonary parameters in dogs.

Fifteen healthy dogs were used in this study. The dogs were randomly assigned to three groups of five animals each. The first group was injected with 2% lidocaine hydrochloride at 4 mg/kg body weight, the second with 2% xylazine hydrochloride at 0.6 mg/kg body weight while the third group was injected with the drug combination of lidocaine and xylazine at 2 mg/kg and 0.3 mg/kg respectively, in the same syringe. All injections were made into the lumbosacral space. Changes in cardiopulmonary and hematological parameters in dogs were recorded over a 4-hour monitoring period.

Epidural administration of lidocaine and xylazine resulted in significant decline in TEC, PCV and Hb. Significant changes in heart rate only occurred in dogs administered with epidural xylazine and drug combinations of lidocaine-xylazine while Dogs injected with epidural lidocaine, xylazine and lidocaine-xylazine had significant changes in their respiratory rates. Lidocaine-xylazine combination resulted in a significant bradycardia and respiratory depression compared to lidocaine and xylazine.

It is concluded that significant cardiopulmonary depression should be anticipated particularly when lidocaine-xylazine and xylazine are used for epidural anaesthesia in dogs. Devoted monitoring is therefore imperative to avoid untoward outcomes.