Comparative evaluation of acepromazine and diazepam effects on parameters of splenic vessels in cats using color doppler ultrasonography

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Abstract

Color doppler ultrasonography is a suitable method for assessment of vascular hemodynamics. This procedure is non-invasive and has no side effects. The purpose of the present survey was the evaluation of acepromazine (0.15 mg/kg) and diazepam (0.4 mg/kg) effects on spleen vascular indices in healthy native cats by color doppler ultrasonography technique. The present study was done on twenty native cats (10 male and 10 females) and in a similar weight range. In the first group, diazepam was injected and in the second group, acepromazine only. Vascular indices of spleen (artery and vein) were measured in two groups in times 10, 30 and 60 minute (after administration of the drug) in the studied. Peak systolic velocity (PSV), end diastolic velocity (EDV), mean velocity (MV), resistive index (RI), pulsatility index (PI), volume flow (VF) and spectral wave forms (SWF). The obtained results showed that arterial vascular parameters of PSV, EDV, MV and VF had a significant difference between two groups. The most changes were seen in the treated group with acepromazine, so that PSV and EDV indices were increased from 14.98±1.13 and 11.83±1.12 in minute 10 to 18.21±1.13 and 16.19±1.12 in minute 60 (according to cm/see). In survey of vascular indices of vein, parameters of EDV, MV, RI, PI and VF were significant between two groups. In conclusion, the present results showed that acepromazine compared with diazepam, was caused more perfusion in splenic arterial vascular significantly. As a result acepromazine cannot be an appropriate drug for restraint of cats for ultrasonography evaluation of abdominal cavity, but diazepam can be administered without side effects in restless cats.

Key words: Acepromazine, Diazepam, Splenic vessels, Color doppler, Ultrasonography, Cat

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