

Summary of the DVSc thesis No. 12172, Faculty of Veterinary Medicine, Urmia University.

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Title of thesis:

Comparison of sedative and cardiovascular effects of combination of pregabalin-xylazine versus acepromazine - xylazine in horse

Summary: In this study, two combinations of acepromazine-xylazine and pregabalin-xylazine were compared and investigated in terms of sedation, physiological indicators, response to stimuli, electrocardiographic and echocardiographic parameters in horses. Animals were subjected to two treatment methods: in the first group, intravenous injection of xylazine (1 mg/kg) and acepromazine (0.05 mg/kg) and in the second group, intragastric administration of pregabalin (4 mg/kg) 60 Minutes before the intravenous injection of xylazine (1 mg/kg) was done. The degree of sedation by measuring the height of the head from the ground and evaluating the response to stimuli. Also, heart rate, breathing rate, rectal temperature, mean arterial blood pressure, number of cecum movements, echocardiography and electrocardiography parameters were also evaluated. The evaluation of the first treatment method was done at zero times (five minutes before the drug injection), 5, 15, 30, 60 and 90 minutes after the intravenous injection of xylazine and acepromazine, and the evaluation of the second treatment method was done at zero times (55 minutes after administration pregabalin) and 5, 15, 30, 60 and 90 minutes after intravenous injection of xylazine. The duration of sedation and lack of response to stimuli was longer in the pregabalin-xylazine group than in the acepromazine-xylazine group. The heart rate decreased more in the acepromazine-xylazine group than in the pregabalin-xylazine group. Breathing rate decreased more in acepromazine-xylazine group than pregabalin-xylazine group. The decrease in body temperature was higher in the acepromazine-xylazine group than in the pregabalin-xylazine group. The decrease in mean arterial blood pressure was greater in the acepromazine-xylazine group than in the pregabalin-xylazine group. The return of cecal movements to the normal state occurred earlier in the pregabalin-xylazine group than in the acepromazine-xylazine group. According to the results of echocardiography, the stroke volume in the acepromazine-xylazine group was higher than the pregabalin-xylazine group most of the time, however, due to the greater reduction in heart rate in the acepromazine-xylazine group, the total cardiac output in this group, it was often lower than the pregabalin-xylazine group. According to the ECG results, xylazine by affecting the atrio-ventricular node and increasing the P-R interval caused a decrease in heart rate in both treatment methods, and as it was said, the rate of this decrease was more severe in the xylazine-acepromazine group and caused more decrease in cardiac output. Considering the problems of acepromazine in horses and also comparing the sedative, physiological and cardiovascular effects of two treatment methods, the use of pregabalin-xylazine combination in horses is more appropriate.