

## Evaluation of sedation status, clinical and cardiorespiratory effects of clonidine hydrochloride on dogs

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### Abstract

Clonidine is an alpha-2 agonist which has been widely known as an antihypertensive agent in human medicine. Due to the importance of the alpha-2 agonists as sedatives and analgesics; it seems that there is a lack of information about clonidine in the veterinary science. The aim of the present study was to evaluate sedation status, clinical and cardiorespiratory effects of clonidine alone, and compare it with xylazine and acepromazine in dogs. To do this, five adult mixed-breed male dogs were used. Health status was assessed by means of physical examination, a complete blood count and serum biochemical analysis. All dogs respectively received intramuscular acepromazine (0.2 mg/kg), xylazine (1 mg/kg), and clonidine (0.03 mg/kg) within a 10-day interval. The degree of sedation, heart rate, respiratory rate, and rectal temperature was recorded before injection until 90 min post-injection. Blood samples were also collected before injection and 1, 3, 6 and 24 hours after that. As a result, there were no significant differences between the sedation status of the three groups at any time. Cortisol levels, except for a significant increase between acepromazine and xylazine 3 hours post-injection, were not significantly different. The reduction of heart rate and respiratory rate was more significant in the xylazine and clonidine group than in the acepromazine group. According to the results, it seems that the sedative effects of clonidine were acceptable compared with the other groups in the study. With further studies, administration of clonidine (0.03 mg/kg) as a sedative and preanesthetic drug could be recommended intramuscularly.

**Key words:** Alpha-2 agonist, Clonidine, Dog, Sedation

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