

Formulation of lorazepam oral solution and evaluation of its CNS depression effect in cat

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Background and Aims: The aim of this study was formulation of oral solution of lorazepam and investigation of CNS depression of this solution in cat.

Methods: This formulation was prepared by addition of lorazepam powder in special blend of propylene glycol and poly ethylene glycol 400. The appropriate concentration for this product was 8mg/ml. In the present experiment 8 cats received lorazepam with doses of (2, 4, 8mg/ Kg, P.O.). The animals were fasted for 12 hours prior to the study to minimize the effect of gastric contents. Each animals was investigated continuously for CNS depression to assess drug effect on the behavior, scaled as 0= normal, 1=slight ataxia, 2=marked ataxia, 3=immobility, 4=no reaction. Animals did not accept the drug solution with milk but solution which was mixed with meat was taken by cats. The oral solution of lorazepam produced CNS depression which ranged from ataxia to anesthesia.

Results: Results showed that lorazepam oral solution can be adsorbed from gastrointestinal track and intern to the blood circulation and produce depression effect on CNS.

Conclusions: Using of oral lorazepam solution could be considered as substitute way for sedation, premedication and general anesthesia in veterinary.

Keywords: Cat; CNS depression; Lorazepam; Oral solution