Intranasal midazolam versus intravenous midazolam for the management of canine status epilepticus: A multicenter randomized parallel-group clinical trial

Purpose
To compare safety and effectiveness of intranasal midazolam to intravenous midazolam for treatment of status epilepticus

Background
Epilepsy is a neurological condition that affects both humans and dogs. Status epilepticus is a life-threatening complication of epilepsy that occurs when a seizure lasts longer than five minutes or when seizures occur very close together with no recovery time in between seizures. Drugs called benzodiazepines are the gold standard treatment for status epilepticus in dogs and people. Various methods of drug delivery have been used: rectal, nasal, under the tongue, and via an IV. IV administration in the hospital or rectal administration at home are typically recommended. Recently, giving midazolam through the nose has been shown to have superior effects compared to rectally-administered valium. Our goal is to compare intranasal midazolam to IV midazolam to establish better recommendations for treatment of status epilepticus, particularly in the home setting or when IV access cannot be obtained.

Eligibility
Dogs of any weight, breed, or age presenting to the Veterinary Teaching Hospital who has been in status epilepticus for more than 5 minutes prior to arrival or those that are witnessed to have entered status epilepticus in the hospital

Exclusion
Dogs will be excluded if a toxic or metabolic cause is known or highly suspected (e.g. chocolate ingestion, hepatic encephalopathy, hypoglycemia)

Study Design
Dogs in status epilepticus will be randomly assigned to either intranasal midazolam 0.2 mg/kg via nasal atomizer or intravenous midazolam 0.2 mg/kg to control status epilepticus or seizures lasting longer than 5 minutes. If the initial treatment is unsuccessful, additional treatment will be administered.

Compensation
The study pays for the intranasal atomizer (MAD) device.

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