

WELL LIFE COMPOUNDING PHARMACY

CANINE EPILEPSY

The following clinical review was conducted to determine therapeutic serum drug concentrations in epileptic dogs treated with potassium bromide – “Therapeutic serum drug concentrations in epileptic dogs treated with potassium bromide alone or in combination with other anticonvulsants: 122 cases (1992-1996)” (J Am Vet Med Assoc. 1998 Nov 15;213(10):1449-53).

OBJECTIVE: To determine therapeutic serum drug concentrations in epileptic dogs treated with potassium bromide.

DESIGN: Retrospective study.

ANIMALS: 122 dogs with major motor epilepsy.

PROCEDURE: Medical histories were collected for epileptic dogs treated with potassium bromide with or without Phenobarbital sodium or primidone, from which serum was submitted for bromide analysis from May 1992 to May 1996 to the Therapeutic Drug Monitoring Program at Cornell University’s College of Veterinary Medicine. A therapeutic response (improved seizure control) was defined as a > or = 50% reduction in seizure frequency following initiation of bromide treatment. Serum bromide and Phenobarbital concentrations and therapeutic outcome were determined for all dogs.

RESULTS: 72% of epileptic dogs had a > or = 50% reduction in seizure frequency following initiation of treatment with potassium bromide. Discontinuation of barbiturate treatment was possible in 19% of those dogs originally treated with Phenobarbital or primidone. Of those dogs continued on bromide and pentobarbital, 45% maintained seizure control with serum pentobarbital concentrations < 20 micrograms/ml. Significantly higher serum bromide concentrations were required when dogs were initially or eventually treated with bromide alone (mean bromide concentration, 1,906 micrograms/ml) compared with dogs treated with potassium bromide along with a barbiturate (mean bromide concentration, 1,621 micrograms/ml).

CLINICAL IMPLICATIONS: When dogs are treated with bromide and pentobarbital, a reasonable therapeutic range for serum bromide treatment alone, the range is 880 to 3,000 micrograms/ml. When Phenobarbital is used in combination with bromide, a reasonable therapeutic range for serum Phenobarbital concentrations is 9 to 36 micrograms/ml, although in some dogs treated with bromide, Phenobarbital can eventually be discontinued. PMID: 9828942

Example of how you might prescribe:

**Potassium Bromide 250mg/ml
Flavored Oral Solution
30ml**

Give 1ml QD or as directed