

POTASSIUM BROMIDE

BRANDNAME: K BROVET

Available in
250 mg and 500 mg
CHEWABLE TABLETS,
VANILLA FLAVORED ORAL SOLUTION
and through
compounding pharmacies
in assorted strength
liquids and capsules

BACKGROUND

In older times, bromides were licensed and used routinely for treating seizure disorders in humans; however, when phenobarbital was introduced, the human market for bromides was completely eclipsed. It soon became unprofitable to continue the FDA registration for bromides and the manufacture of bromides became relegated to chemical companies only. Because of the importance of bromide for treating canine epileptics the FDA has allowed a commercial product to be marketed, although many veterinarians use compounding pharmacies for custom-made prescriptions.

Potassium bromide is a highly reliable anticonvulsant medication in dogs. When compared to phenobarbital, potassium bromide seems to be similarly effective and has fewer undesirable side effects. Potassium bromide may be used alone (as "monotherapy") or can be combined with other anti-medications.

Potassium bromide works by competing with chloride ions for access to brain tissues. As bromide levels in the brain rise and chloride levels drop, electrical activity in the central nervous system is inhibited, making the initiation of a seizure difficult.

This medication was initially reserved for dogs who either could not tolerate phenobarbital for seizure control due to unacceptable side effects or who needed additional seizure control medication beyond what their phenobarbital can provide. In fact, seizure control with potassium bromide is so effective that now many practitioners reach for it as a first choice therapy without even using phenobarbital.

HOW THIS MEDICATION IS USED

Potassium bromide is given either as a pill or as oral liquid once daily. It can be given with or without food; however, it has a bitter flavor which can usually be masked by giving it with food.

Because it takes months to achieve a stable effective blood level of potassium bromide, many doctors will recommend a "loading dose" to shorten this period and get a head start on the therapeutic blood level. Using a loading dose can bring the patient to a therapeutic blood level a month sooner but the patient can be extremely sedated during the loading phase. Many doctors prefer to do the loading in a hospital setting for this reason. Because it takes so long to reach a stable therapeutic bromide blood level, additional seizure medications may be needed at least at first.

Potassium bromide is effective in cats but can cause a life-threatening inflammatory lung disease so it is regarded as a last choice in this species.

MONITORING

According to the ACVIM Consensus Statement on Seizure Management in Dogs, the first monitoring blood level should be drawn 6-12 weeks after beginning potassium bromide and annually thereafter unless there are breakthrough seizures or suspicions of toxicity.

COMMON SIDE EFFECTS, GENERALLY MINOR:

Some nausea is associated with the administration of potassium bromide. Giving the medication with food generally controls this.

Since potassium bromide is a salt, excess thirst and urination can be observed with this medication.

Drowsiness or grogginess, which can be marked, is not abnormal during a loading period when potassium bromide therapy is started. It is important not to give more potassium bromide to a groggy pet even if another dose is due.

Occasionally a dog will develop a cough which resolves when potassium bromide is discontinued.

SIDE EFFECTS OF CONCERN:

In human beings, a toxicity syndrome called "bromism" results when blood bromide levels become too high. Symptoms reported include: drowsiness, weakness, muscle tremors and soreness, appetite loss, and constipation as well as skin rashes. For this reason bromide levels are monitored periodically. A similar syndrome can occur in dogs if bromide levels become too high.

Dogs with a history of pancreatitis may experience an exacerbation if potassium bromide is used to treat a seizure disorder. This is particularly true for patients taking both bromide and phenobarbital.

INTERACTIONS WITH OTHER DRUGS

The use of potassium bromide as a sole seizure control agent is no longer uncommon; however, the concurrent use of potassium bromide with phenobarbital allows for a reduction of phenobarbital use by 30% to 50%, which is usually enough to alleviate negative phenobarbital side effects. In many cases phenobarbital can be tapered off completely without seizure recurrence.

The use of diuretics (medications that lead to an increase in urine production), can wash out potassium bromide so that blood levels can drop (and potentially an increase in seizures could occur).

CONCERNS AND CAUTIONS

The administration of potassium bromide interferes with laboratory measurement of chloride, thus any tests for chloride will be falsely elevated.

Potassium bromide should be given with food.

In cats, over 1/3 of patients develop a severe asthma-like lung condition. Potassium bromide is not a good choice for seizure control in the cat.

Abruptly discontinuing potassium bromide can precipitate severe seizures. If it becomes desirable to discontinue therapy, your veterinarian can instruct you regarding discontinuing the drug. That said, if a single dose is accidentally skipped, this is unlikely to be a problem as blood levels change so slowly. If the dose is not given at the normal time, simply give it later in the day but there is no need to double up on the next dose even if a single dose is missed all together.

Patients with kidney disease will require reductions in potassium bromide dosing as this drug is removed via the kidneys. Consequently, because potassium bromide is not metabolized by the liver, it is a good choice for seizure control for dogs with liver disease.

Dietary salt content can affect bromide blood levels. Low salt diets can lead to retention of potassium bromide and can drive the blood level up and similarly a salty diet can drive bromide levels down. Avoid changes in dietary salt content so that bromide levels can remain stable.

Keep potassium bromide away from light and store at room temperature. Do not refrigerate.

