

Seizures: Treatment of Resistant Cases

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ANTIEPILEPTIC DRUGS FOR RESISTANT CASES

Treatment Options

Several newer drugs are available for treating seizures. They can be used in combination with phenobarbital and potassium bromide to improve seizure control in severely affected animals. These medications may also be tried as the sole treatment for seizures in some cases, but their effectiveness as a sole therapy is unknown at present. Most of these newer drugs are also expensive. Once seizure control has been achieved with any of these drugs, the dosage of phenobarbital or potassium bromide can often be decreased.

Levetiracetam

Levetiracetam (*Keppra*) is an antiepileptic drug that has few side effects and may offer good seizure control in dogs. It is effective in many cases refractory to other drugs. Levetiracetam is not eliminated from the body by the liver, so it can be used in animals with liver disease. Levetiracetam comes as a tablet and is usually given three times daily.

Gabapentin

Gabapentin (*Neurotin*) is also effective in many animals with seizures refractory to other drugs. The most common side effect is sedation. Gabapentin is eliminated from the body by the liver and kidneys but has not yet been shown to cause liver disease. Gabapentin comes as a capsule and is administered three times daily.

Zonisamide

Zonisamide (*Zonegran*) may be as effective as levetiracetam or gabapentin. It is well tolerated by dogs. Side effects include decreased appetite, sedation, and incoordination. Allergic reactions, decreased tearing (dry eye), and blood disorders are potential side effects. Zonisamide is eliminated from the body by the liver, so is avoided in animals with liver disease. It comes as a tablet and is administered twice daily.

EMERGENCY DRUGS

Diazepam

Diazepam (*Valium*) is not a new drug and is widely used in the emergency treatment of seizures. Diazepam is often used in hospitalized animals, because it is given intravenously during a seizure. Diazepam can also be administered into the nose or the rectum. Dogs with severe seizures can be given diazepam rectally at home to reduce seizure severity and to try and prevent repeated seizures. In dogs, the effect of diazepam is short lived, so the drug is not used for long-term management of seizures. On rare occasions, cats on oral diazepam can develop severe, often fatal, liver damage, so oral administration of diazepam is done with caution in cats.

Follow-up Care

Once antiepileptic therapy is started, treatment commonly continues for life. Many antiepileptic drugs have side effects, so follow-up evaluations and close monitoring are required. At the beginning of treatment, follow-up evaluations and telephone consultations are used to ensure the successful control of seizures via appropriate dosing. Once the seizures are controlled, the animal is evaluated at least every 6 months. In addition to drug blood levels, other routine laboratory tests are used to monitor for side effects and to evaluate the animal's general health. Always discuss any changes in medications with your veterinarian; it is dangerous to make dosage adjustments on your own. Even if side effects occur, antiepileptic drugs should not be abruptly discontinued without consultation with a veterinarian. Discontinuation of these drugs is usually done gradually, under the direction of your veterinarian.