

Bromethalin

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- Bromethalin is a neurotoxic rodenticide that produces cerebral edema in dogs, cats, and other species (Color Plate 36-1).
- Minimal oral toxic doses are approximately 0.3 and 2.5 mg/kg in cats and dogs, respectively.
- Extremely high doses produce muscle tremors, increased activity, hyperthermia, and seizures within 2 or more hours after ingestion.
- More frequently bromethalin poisoning develops 12 to 24 hours after ingestion. Poisoned animals develop progressive ataxia, paresis, and hindlimb paralysis and intensifying central nervous system depression that may ultimately result in semicoma or coma. The most prominent lesion is diffuse white matter edema throughout the central nervous system.
- Diagnosis of bromethalin toxicosis is based on a history of exposure, development of compatible clinical signs, and chemical confirmation of bromethalin residues in fat, brain, liver, kidney, or other tissues.
- Treatment is via gastrointestinal tract decontamination, including appropriate use of emetics and repeated administration of oral activated charcoal. Control of cerebral edema is crucial. Mannitol, dexamethasone, and furosemide have been used with variable success. Symptomatic and supportive care, including control of seizures, is recommended.

Introduction

Bromethalin (2,4-dinitro-*N*-methyl-*N*-[2,4,6-tribromophenyl]-6-[trifluoromethyl] benzene-amine) was discovered in the mid-1970s¹ and has subsequently been incorporated into a number of rodenticide products. Bromethalin inhibits brain adenosine triphosphate (ATP) production and can be used to control warfarin-resistant rats and mice. Although the incidence of poisoning is not known, widespread use of bromethalin-based products occurs in the United States. As with other commonly used rodenticides, accidental poisoning of dogs, cats, and other companion animals with bromethalin is not uncommon. Malicious poisonings with bromethalin have also been documented.

Sources

Bromethalin-containing rodenticides have been marketed under a variety of trade names including Assault®, Gladiator®, Trounce® (PM Resources, Inc., Bridgeton, MO), Fastrac®,