



VETERINARY VOICE: Tips of the Trade

Ophthalmology- Ivermectin Toxicity

How does ivermectin toxicosis occur?	<ol style="list-style-type: none">1. Gross overdosage of the medication (i.e. using horse/cattle formulation in dogs)2. Some breeds of dogs are hypersensitive to the drug (herding dogs, especially collies). This stems from a genetic defect in the MDR-1 gene (multiple drug resistance).
What are clinical signs of overdosage?	Impaired level of consciousness (depression to coma), muscle tremors, hyper-or hypothermia, absence of menace response, mydriasis with or without abnormal PLRs, and various types of strabismus. Blindness may occur without marked CNS signs.
Ophthalmoscopic findings?	Blindness has been observed without marked CNS signs and is usually accompanied by mydriasis in normal ambient lighting. Ophthalmoscopic findings may include papilledema (swelling of optic nerve head) and retinal edema with folds. Residual pigment disruption may be visible in the nontapetal fundus with recovery.
Diagnosis?	Based on clinical signs (adverse signs within hours of administration or accidental ingestion) and a history of recent administration or ingestion of ivermectin.
Treatment and prognosis?	Vision loss is temporary, with recovery in 2-10 days. Therapy is aimed at supportive nursing care. Intensive care may be required if clinical signs become severe. Animals typically make full recoveries. However, complete recovery may be prolonged (weeks), and affected dogs may die of severe respiratory /cardiovascular depression in severe cases.
Questions?	The Veterinary Specialty Center of Tucson has a board-certified ophthalmologist available for questions and consultations on ophthalmic diseases and surgeries during the weekdays. She is also on-call to provide consultations to VSCT emergency doctors and to perform emergency procedures for patients seen by the VSCT emergency service. Board-certified ophthalmologists have four additional years of training after veterinary school and are certified by the American College of Veterinary Ophthalmologists' to assure competency in advanced veterinary ophthalmology.
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