Sharon M. Gwaltney-Brant, DVM, PhD, Diplomate ABVT & ABT, ASPCA Animal Poison Control Center, Urbana, Illinois

Garbage Ingestion

A 5-year-old, neutered male Labrador retriever presented in the evening with a history of vomiting, ataxia, and generalized weakness.

History. That morning the owner found evidence that the dog had raided the trash can sometime during the night. The owner was not concerned at the time because he did not believe that there had been anything harmful in the trash that the dog could have ingested.

Diagnostics. On physical examination, the dog was depressed and reluctant to stand, had mild hindlimb tremors, and was hyperthermic (105.5° F). Abdominal palpation was unremarkable. Bilateral patellar reflexes were slightly exaggerated, but the rest of the neurologic examination was unremarkable. Clinical blood testing showed that serum lipase and serum alkaline phosphatase levels were approximately twice the high normal value. A complete blood count showed elevated white blood cells (22,450 cell/µl) with mature neutrophilia.

continues

ASK YOURSELF...

Following are the contents of the trash can. Which need to be considered as the potential cause of the dog's signs?

A. Raw carrots and celery
B. Quarter stick of unsalted butter
C. Package of dehydrated French onion soup mix
D. Macadamia nuts
E. Avocado pit

Correct answer: D
Macadamia nuts

Macadamia nuts are a popular food snack for humans, but they can cause significant clinical signs if ingested by dogs—the only species in which macadamia nut toxicosis has been documented. The syndrome has been reproduced experimentally in dogs, although the precise mechanism of toxicity has not been defined. A toxic "dose" of roasted macadamia nuts for dogs has been estimated as approximately 2 to 3 g/kg (equivalent to approximately 1 nut/kg body weight). Dogs ingesting macadamia nuts may vomit; become weak, ataxic, or lethargic; and experience tremors and hyperthermia. Other reported signs include joint and muscle pain. Weakness generally manifests as reluctance or inability to rise and reluctance to remain standing. Fortunately, while the syndrome caused by macadamia nut ingestion in dogs can be unpleasant, it is not usually life-threatening. Most dogs recover completely within 24 to 36 hours of ingestion.

Laboratory findings that may be noted in dogs with macadamia nut toxicosis include elevated levels of serum lipase, serum triglycerides, and serum alkaline phosphatase and elevated white blood cell counts. Most of these findings are expected to return to normal 24 to 48 hours after ingestion.

Treatment of macadamia nut toxicosis generally involves care to relieve clinical signs—which are expected to resolve without specific treatment. Withholding food and water for a few hours often allows the stomach to settle enough for vomiting to stop. Reintroduction of water may then be attempted; ice chips or cubes may be used as needed to limit initial water intake. For animals with prior health issues and pediatric or geriatric patients, admission to the hospital for fluid therapy, antiemetics, and close observation may be prudent. If a coingestion of chocolate has occurred (eg, chocolate-covered nuts or chocolate macadamia nut cookies), estimation of the dose of chocolate should be made and appropriate treatment instituted if the chocolate dose is determined to be sufficient to cause methylxanthine toxicosis.

Tx at a Glance

- **No clinical signs; ingestion within 4 hours:**
  Induce emesis; consider administering activated charcoal
- **No clinical signs; ingestion 4–12 hours prior:**
  Consider administering activated charcoal
- **Clinical signs; young, healthy dog:**
  Can probably be managed at home (withdrawal of water and food until vomiting resolves; confinement to a cage and restriction on movement)
- **Clinical signs; prior health issues:**
  Manage in veterinary clinic with antiemetics and intravenous fluid therapy as needed

Ronald M. Bright, DVM, MS, Diplomate ACVS, is a staff surgeon at VCA Veterinary Specialists of Northern Colorado and past president of the American College of Veterinary Surgeons. He is a member of the NAVC Board of Directors and has lectured at numerous NAVC conferences. Dr. Bright received his DVM from Ohio State University and his MS from Colorado State University. He completed a residency in small animal surgery at University of Missouri.

Derek B. Fox, DVM, PhD, Diplomate ACVS, is assistant professor of small animal orthopedic surgery at University of Missouri–Columbia. His research interests include meniscal tissue engineering and angular limb deformity correction. Dr. Fox, a speaker at the 2006 NAVC, is a graduate of Indiana University and received his DVM from Michigan State University. He completed a 1-year rotating small animal internship, a small animal surgery residency, and a PhD in pathobiology at University of Missouri–Columbia.

Sharon M. Gwaltney-Brant, DVM, PhD, Diplomate ABVT & ABT, is vice president and medical director of the ASPCA Animal Poison Control Center, Urbana, Illinois, and an adjunct instructor for University of Illinois. Among other professional activities, she is a member of the Research Advisory Committee of the Newfoundland Club of America. Dr. Gwaltney-Brant received her DVM from North Carolina State University and worked for 3 years in small animal practice. She obtained her PhD in pathology at Kansas State University, worked as an anatomic pathologist at KSU, and then entered a postdoctoral position at the National Animal Disease Center in Ames, Iowa.

Debra F. Horwitz, DVM, Diplomate ACVB, has a behavior referral practice in St. Louis, Missouri, and is an adjunct faculty member at University of Missouri. She received her DVM from Michigan State University. Dr. Horwitz writes and speaks for professional and lay audiences on behavior topics and is coeditor of the *BSAVA Manual of Canine and Feline Behavioral Medicine*. Her most recent book, *The*