Optimizing diagnostic outcomes and advising owners appropriately with respect to suspect toxicology cases require proper case management. Thorough case management of toxicology emergencies extends beyond treating the patient. Obtaining a thorough case history and knowing what specimens are needed to perform diagnostic testing is key. Obtaining a complete case history begins with listening to the client, obtaining a complete medical history of the patient, inquiring about the home environment, and establishing a timeline of the exposure event. The physical examination is important not only in establishing the patient status, but aids in determining differential diagnoses. Toxicoses are frequently missed during physical examinations as some clinical signs of toxicity may mimic other medical conditions. Managing toxicology emergencies includes stabilizing the patient, preventing absorption of the poison, and knowing what to have on-hand to treat the patient. Details regarding the approach to toxicology cases including specific questions to ask and key factors to keep in mind with regard to managing cases and patient monitoring and treatment will be discussed.

You Have a Toxicology Case, What Next?

Knowledge of the best diagnostic specimens to retain and submit for toxicology testing is another important aspect of case management. This is crucial particularly when toxicity is suspected, but the specific toxic agent is unknown or case history is limited. Lists of the preferred ante-mortem and post-mortem specimens to collect are provided below. In addition to these preferred toxicology specimens, it is important to reserve samples for potential bacteriology and virology testing.

Ante-Mortem Specimens to Collect for Diagnostic Toxicology

- Vomitus or Stomach Contents
- Urine
- Whole Blood (in red-top, clot tube)
- Whole Blood (in EDTA or heparin)
- Serum or Plasma
- Source Material (water, foodstuff, bait)

Post-Mortem Specimens to Collect for Diagnostic Toxicology

- Stomach Contents
- Urine
- Liver
- Kidney
- Brain
- Heart Blood (if possible)
- Source Material (water, foodstuff, bait)
- Fix representative tissues in 10% formalin for histopathology
The diagnostic approach to toxicology cases including recommendations for proper sample collection, storage, and shipment will be addressed. Case studies will be reviewed highlighting the pitfalls to avoid in case management and approach to diagnostic testing.

Diagnostic Approach to Handling Pet Food Complaints

Navigating inquiries from clients and pet owners regarding pet food complaints can be challenging to navigate, particularly when looking for guidance on diagnostic testing and case management. Although the majority of pet food products are safe, there are some instances in which chemical contamination has caused outbreaks of illness in small animals. This can be due to incorrect formulation of nutrient components, mixing errors during the production process, or incorporation of contaminated raw materials (such as aflatoxin contaminated grains). For some cases, diagnostic testing is available to detect some of these adulterants in contaminated foodstuffs; however, diagnostic testing in biological samples from affected animals can be limiting in some cases. There are also cases in which the food source has been linked to causing disease in animals; however, the causative agent is not known. One example of this is the ongoing issue of some types of chicken jerky treats causing clinical signs of a Fanconi-like syndrome in dogs. To date, the “toxic agent” has not been identified; therefore, there is no diagnostic test available. There have been more than 3,600 reports of chicken jerky treat-implicated illness in dogs and more than 580 deaths over the past several years. These cases can be difficult to navigate, especially when trying to counsel pet owners.

In all cases, establishing a causal relationship between the clinical signs and suspect food source is crucial. If it is deduced that the food source may be contributing to pet illness, diagnostic testing may be rewarding in some cases provided the original food source is retained. Therefore, effective use of the diagnostic laboratory and knowing the appropriate agencies to contact for guidance is essential. For example, in cases in which aflatoxin contamination is suspected, the points of contact would be the ADDL or the Office of the Indiana State Chemist. However, in cases involving chicken jerky treats in which the causative agent is not known and for which there is no diagnostic test, the complaint and all pertinent case information can be reported to the Food and Drug Administration Center for Veterinary Medicine (FDA CVM).

Details on how to approach cases such as these will be discussed in order to provide more guidance on who to contact, how to manage the case and diagnostic testing, and how to report a pet food complaints.