Lecture summaries

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Unique and Emerging Intoxications: Experiences from a Veterinary Diagnostic Toxicology Laboratory

The number of potential toxicants to which small animals can be exposed is immense. The recognition and management of cases involving common toxicants is generally straightforward. However, there are less common toxicant exposures that present diagnostic challenges. This presentation will discuss less common intoxications caused by mushrooms, fungi and cyanobacterial algae. In addition, case examples involving tartaric acid and diethylene glycol will be discussed. Finally, potential efficacy of and complications from use of select decontamination procedures will be presented.

Learning Goals

1. Enhanced awareness of toxicants that are less often encountered in practice or not considered in a differential diagnosis.
2. Understand the history, presentations, mechanisms of toxic action and diagnosis for each of the discussed toxicants.
3. Learn how an exposure assessment is used to help with a diagnosis of intoxication.
4. Understand the risks and efficacy of specific decontamination proceedures.

Exposure of Dogs and Cats to Drugs of Abuse

While known animal exposures to human "drugs of abuse" (DA) were previously considered relatively uncommon in veterinary medicine, the trends are changing. When such exposures occur, they are typically considered emergencies. This presentation describes confirmed cases of DA exposure in pets. In 75% of the DA cases, the detected drugs included amphetamine-type stimulants and metabolites (methamphetamine, amphetamine, or both). In 47% of cases, a combination of more than one drug group was found. In at least 32% of cases, the samples were submitted due to suspicions of animal cruelty. Most cases were diagnosed from a urine specimen.

Learning Goals

1. Gain an appreciation for the types of drugs of abuse intoxication likely to be presented to emergency clinics.
2. Understand the clinical presentations and diagnostic approaches for each class of drugs of abuse.
3. Understand the difference between screening vs. confirmatory testing in drugs of abuse cases.

Effective Use of Veterinary Toxicology Laboratories to Diagnose Suspected but Unknown Intoxications

The diagnosis of intoxication depends on fullfilling five major diagnostic criteria: history, clinical signs, clinical laboratory evaluation, postmortem examination and chemical testing of appropriate biological and environmental samples. Often postmortem examinations are not done and, unfortunately, there is the preception that if there is no known exposure to a toxicant chemical testing is not possible. This presentation will emphasize cases where postmorten examination and/or non-targeted testing of samples were critical to reaching a diagnosis. The difference between qualitative and quantitative testing will be discussed.

Learning Goals

1. Understand how suspected intoxication cases, for which no history of specific toxicant exposure is available, can be approached through collection of appropriate samples and non-targeted analytical testing.
2. Understand those situations in which such postmortem and analytical testing is invaluable for case resolution.
3. Understand when qualitative vs. quantitative analytical testing is appropriate.