PEER REVIEWED

Considerations for veterinary practitioners involved in feed-related toxicology cases

Simon J. Timmermans,[1] DVM, MS; **Scott L. Radke**,[2] DVM; **Steve M. Ensley**,[3] DVM, PhD
[1]Veterinary Research and Consulting Services, Hays, KS 67601
[2]Department of Veterinary Diagnostic and Production Animal Medicine, Iowa State University, Ames, IA 50011
[3]Kansas State University Veterinary Diagnostic Laboratory, Manhattan, KS 66506

Abstract

The objective of this paper is to identify key considerations for production animal veterinarians involved in legal cases regarding feed-related errors. Veterinarians are trained in the science of management and production, but are often ill-prepared for advising clients on potential litigation that may result when large monetary losses are incurred. The availability of modern analytical equipment and technology can provide practitioners with more information to understand the interactions of toxins with production medicine. This information may further elucidate the source of potential losses. The following considerations were derived from experiences at the Iowa State University Veterinary Diagnostic Laboratory when involved in several legal cases. Since it is likely that production veterinarians will be involved in a legal case at some point in their career, this paper is intended to help practitioners to be better prepared for cases involving feed-related toxicology cases.

Key words: legal case, litigation, feed toxicology, feed mixing errors

Résumé

L'objectif de cette étude est d'identifier des éléments clés lorsque les vétérinaires en production animale sont impliqués dans des cas juridiques au sujet d'erreurs reliées à l'alimentation. Les vétérinaires connaissent bien les fondements de la gestion et de la production mais ils sont souvent mal préparés pour conseiller les clients en cas de litige entrainant des pertes monétaires importantes. La disponibilité de technologie et d'équipement d'analyse moderne peut permettre aux praticiens d'avoir plus d'information pour comprendre l'interaction entre les toxines et la médecine de production. Cette information peut aussi permettre d'élucider la source des pertes potentielles. Les éléments suivants sont tirés d'expériences au *Iowa State University Veterinary Diagnostic Laborat*ory impliquant plusieurs cas juridiques. Comme il est assez probable que les vétérinaires en production soient impliqués un jour ou l'autre dans des cas juridiques au cours de leur carrière, cette présentation vise à mieux préparer les praticiens dans des cas de toxicité reliés à l'alimentation.

Introduction

The traditional view of food animal toxicology involved situations characterized by acute exposure to a toxin, leading to death and/or adverse health. Increased regulations associated with agricultural chemicals and application have contributed to reduced exposure. Computerized automation has led to feed manufacturing becoming more specialized, while reducing mixing errors with higher levels of quality control. Modern equipment and technological advances have broadened our understanding of the interaction of toxins and animals.[1] This increased awareness allows veterinarians to understand adverse subclinical disease related to sub-therapeutic exposure. The term sub-therapeutic refers to situations where toxins are present in quantities causing subclinical disease, but not in sufficient quantity to cause classical clinical signs associated with toxicity, whether acute or chronic.

As our understanding increases, many new questions are raised about how potential subtle effects alter production and health parameters in food animals. How does a practitioner distinguish suboptimal performance caused by mismanagement from toxin exposure or normal feed components presented in inadequate or excessive amounts? As our knowledge base increases with more sophisticated detection and comprehensive data analytics, progress is being made.

Unfortunately, as our knowledge base improves, the awareness of the magnitude of economic losses associated with sub-therapeutic exposures also increases, as does the potential for litigation and demands for restitution. These situations can place practitioners in unpleasant positions for which they are often unprepared. The following points of consideration are to assist practitioners to be better prepared should they find themselves in this situation.

Consideration #1 – Assume ownership of diagnostic and analytical methods

Attending veterinarians are responsible for submission of appropriate diagnostic samples. The outcome of legal proceed-

ings in toxicology cases is heavily influenced by the accuracy and legitimacy of laboratory results. Accurate and correctly applied analytical methods are crucial to providing results that will withstand critical evaluation in the event of litigation.

Diagnostics in potential toxicant exposure events often require specific tissues and samples for definitive diagnosis. Specific details to consider:

1. Smart phones and other technologies allow practitioners to clearly document observations with pictures, video, and voice dictation. Recording observations of acutely affected animals often provides accurate and helpful clues to properly diagnose the cause. Acutely ill animals can be used as index cases, as the diagnostic values in toxicology cases are typically highest when animals are observed in acute stages of the disease.
2. Collect antemortem whole blood and serum samples of acutely affected animals, as well as animals that appear clinically normal. Postmortem whole blood or serum is rarely useful for diagnostics.
3. Take digital pictures of all tissues. This provides information to the diagnostic coordinator of the case as well as documentation of the quality of samples available, and provides an inventory of samples obtained/shipped.
4. Split and retain samples in the event of shipping delays or loss. These samples may ultimately provide the primary diagnosis. When in doubt, a complete set of tissues is recommended as samples that are not collected cannot be analyzed. It is always better to have more samples rather than not enough. Not all samples will be analyzed, but if they are not collected there is potential to miss an important analyte.
5. Antemortem liver biopsies may be useful for animals in cases of chronic exposure. Euthanizing acutely affected moribund animals to collect appropriate samples may be warranted. Be aware of potential effects of treatment modalities on the diagnostic potential of tissues. For example, brain sodium in water deprivation will return to the normal range if the animal was treated with rehydration therapy before death.

Consideration #2 - Use accredited veterinary diagnostic laboratories

The outcome of legal proceedings in toxicology cases depends on the accuracy and legitimacy of laboratory results. Collect appropriate samples and submit to an accredited veterinary diagnostic laboratory that will serve as an impartial third party. Defense attorneys will attempt to dismiss incriminating laboratory results from unaccredited laboratories as a potential result of inadequate testing capabilities and reference ranges. Accurate and correctly applied analytical methods are crucial to providing a result that will withstand critical evaluation.

Consideration #3 - Collect your own samples

When feed formulation errors are suspected, avoid relying on the feed company to collect samples or using their analytical laboratory of choice as the potential for conflicts of interest are significant. Practitioners and producers should collect the samples from the farm premise. Retained samples provided by the feed company may result in a diagnostic conclusion that is contrary to clinical and diagnostic observations. Retained samples stored at the feed manufacturer may be unreliable because any mistakes in labels and storage, along with delivery errors, may occur after collection of these samples.

Consideration #4 - Inform the diagnostic lab of potential litigation

The diagnostic laboratory should be informed immediately to initiate proper documentation of the chain of custody if there is potential litigation. The state department of agriculture must be contacted to initiate a complaint, and to have a feed sample collected by a state inspector. This may trigger additional audits by government inspectors for such things as veterinary feed directives (VFD) and compliance with feed-related regulations.

Consideration #5 - Avoid unnecessary diagnostics

Situations may develop where unnecessary diagnostics may obscure a definitive diagnosis. Practitioners must be mindful that all records and diagnostic results may be requested during discovery in litigation. What practitioners and diagnosticians view as prudent and thorough diagnostic veterinary medicine may be used by a defense attorney to confuse and obfuscate a jury. Experienced practitioners are well aware that diagnostic laboratory results are not always clearly definitive. When a definitive diagnosis is achieved, it may be prudent to discontinue further diagnostics.

Consideration #6 - Be aware of the economics, and who is responsible for payment of diagnostics

Practitioners should have clear understanding of the potential for damaged relationships when toxicology cases occur. Producers often have difficulty comprehending how local representatives for particular companies may turn from supportive acquaintance into a legal adversary. A good rule of thumb is to encourage producers to realize how relationships are often tied to monetary ends. Feed manufacturers or other local entities may admit fault, but insurance company adjustors and their legal team are typically responsible for handling the claim.

Consideration #7 - Attorneys are not created equal

When good documentation and diagnostics provide evidence of damages, settlements can often be reached without involvement of legal counsel. Unfortunately, damages may exceed what can be negotiated between affected parties. When a producer determines that the only recourse left is

to seek counsel, it is important to select an attorney familiar and comfortable with litigation. Attorneys involved in agriculture-related litigation should have expertise in production animal practices, but producers who desire to successfully recover damages will likely have to select an attorney from larger population centers. General practice attorneys from rural areas may find themselves out-matched when litigating against corporate attorneys tasked with defending their respective companies.

Consideration #8 – Maintain impartiality

Practitioners who become involved in litigation must exercise the highest degree of professionalism. Veterinarians are highly trusted professionals who will be given wide latitude by judges and jurors. It is imperative that veterinarians involved in the case remain impartial and unbiased. Practitioners who testify and maintain impartiality will be more valuable to their clients than those actively taking a side.

Consideration #9 – Maintain a professional demeanor

Practitioners must exercise care with recorded communications with clients. Many clients are also personal friends, but all recorded private conversations could be subject to subpoena. Examples include phone calls and messages, emails, social media posts, and text messages. When communicating with clients involved with litigation, practitioners should avoid using erroneous jokes and hyperbole. Defense attorneys may use them to create mistrust with the motives and impartiality of the practitioner.

Consideration #10 – Engage the media with caution

While unusual, there are cases that bring media attention. Practitioners should exercise extreme caution engaging with media or choose not to engage the media entirely. A good rule of thumb is to assume that media representatives may have an agenda which is likely incongruent with that of the veterinarian and producer. Caution should be used when performing diagnostic duties required as a veterinarian in the presence of media representatives. Media videos and pictures may be taken out of context and perceived differently by those who have little understanding of veterinary medicine and food animal production. Practitioners may wish to advise clients to avoid allowing media onto premises.

Conclusions

The purpose of this paper is to provide insights to practitioners who find themselves in the center of a potential toxin-related legal case. This paper is not intended to encourage litigation, but rather it is to offer considerations and observations found useful in our experience through involvement in litigious food animal cases.

Reference

1. Osweiler GD. Diagnostic guidelines for ruminant toxicoses. *Vet Clin North Am Food Anim Pract* 2011; 27:247-254.