Forensic Exam and Report of the Live Victim: An Introduction to Clinical Veterinary Forensic Medicine
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Learning Objectives
- Familiarity with clinical veterinary forensic medicine
- Understanding of the purpose of a clinical forensic exam
- Familiarity with the approach and components of a veterinary forensic examination of live animal victims
- Understanding of how to appropriately document and photograph a forensic exam of live animal victims
- Familiarity with evidence collection and chain of custody related to a clinical forensic exam
- Familiarity with the necessary components of a clinical veterinary forensic report

Overview
- Clinical Veterinary Forensic Medicine
  - Forensic exam
    - Purpose
    - Documenting the animal on scene
    - Forensic medical exam
    - Systematic approach
    - Standard protocol
    - Photography
    - Physical evidence collection, preservation, and chain of custody
  - Forensic report
    - Purpose
    - Contents

What is Veterinary Forensics?
- Forensic Science = Forensics
  - Forensic Medicine
    - Clinical Forensic Medicine
    - Forensic Pathology

The Forensic Exam
- Veterinary forensic medicine must be approached within the context of potential criminal prosecution
- Questions must be considered and answers sought within this context
- These questions are going to be determined by applicable laws
- Must have a working knowledge of the local, state and federal animal abuse laws that may apply to a given case

The Forensic Exam
- Animal abuse is a legal, not a medical determination
- Just because a veterinarian feels that an act qualifies as abuse does not mean that the law recognizes it as such
- Again, the veterinarian needs to be aware of the applicable laws in order to make an informed opinion
The Forensic Exam

- Veterinarians involved in animal abuse cases should be prepared to answer questions such as:
  - Is the animal injured or is its health compromised due to abuse?
  - Does the animal require veterinary care or treatment, emergency veterinary care, or life saving veterinary intervention?
  - How long has the animal been abused?
  - Is the animal experiencing pain or suffering?
  - Has there been a permanent deleterious effect on the animal or its health?

The Forensic Exam

- The forensic exam starts at the scene
- Ideally a veterinarian should be present on scene
- Veterinarians role on scene:
  - Triage of live victims
  - Assist law enforcement with evidence identification and preliminary examination
  - Assessment of the scene and its effects on the victims

The Forensic Exam

- Care must be taken on scene so that the animals and their environment are documented as they were found
- Must document the condition of each individual animal
- Must document the living conditions for each individual animal
- Must document the location of each animal on scene
  - Remember that the animals are evidence

The Forensic Exam

- Forensic medical examinations should occur as soon as rational, as some evidence may change with time

Altering Factors of Evidence

- If the animals are unable to be immediately examined steps should be taken to ensure that critical information is not lost
- On scene be sure to document any evidence on the animal, that may change before the animal can be fully examined
- Take photos of each animal before removing the animal from the property in order to document the condition in which the animals were received

The Forensic Exam

- A forensic medical examination is a detailed and through exam done in order to methodically document physical findings and facilitate the collection of evidence from the patients' body
  - Systematic approach
  - Standard protocol for each animal
The Forensic Exam

- Evaluate ALL body systems
- Note behavior
- Consider and note:
  - Pain and suffering
  - Estimate duration or age of lesion
  - Long term and short term effects
  - Conditions that should have been apparent to the owner/caregiver
  - Conditions that are preventable/care that should have been provided

The Forensic Exam

- Veterinary forensic intake protocol
- Will vary depending on the specifics of the case but should be applied consistently to each animal within a given case
- Diagnostic and other forensic testing
  - For example, if you have a small scale neglect case you may want to perform the following for each animal:
    - Dogs: CBC, Chem, fecal, U/A, and HW
    - Cats: CBC, Chem, fecal, U/A, and FIV/FeLV
    - Other diagnostics as needed

The Forensic Exam

- Ideally full body radiographs should be obtained on all potential victims of abuse
  - Why?
    - Provides valuable information regarding a history of abuse
    - May observe recent, healing, or healed fractures
    - Most victims of abuse have been subject to repetitive abuse

The Forensic Exam

- There should be an overall assessment and medical plan in place for each animal
  - For large scale cases it may be beneficial to implement a medical grading scale so animals requiring further diagnostics, treatment, and monitoring can be quickly identified to streamline ongoing care.

  - Treatment and response
    - It is important to document all treatments provided as well as the animals response to treatment
    - If possible obtain before and after photos

  - All rechecks should be documented

Sample Exam Form

*Note that most of these forms can be found at:
http://www.aspca.org/sample-forms.php*
Sample Supplemental Exam Forms

Hair coat and Nails - Long Haired: Dog  Cat

1. Haircoat a single mat that prevents normal movement and interferes with vision. Yes No
2. Substantial matting of hair coat; large sections of hair matted together. Yes No
3. Numerous mats, but animal can still be groomed without a total clip down. Yes No
4. Hair coat is dirty and has a few mats. Yes No

Foreign material embedded in coat. Yes No

Visible feces on coat Yes No

Fecal / urine staining of hair coat; Yes No
  - of legs Yes No
  - of ventrum Yes No
  - of hind end Yes No
  - other ______________________ Yes No

Strong offensive odor from coat. Will require one or more baths to resolve odor. Yes No

Pododermatitis. Yes No

Choose 1 or 2 to describe toe nails
1. Nails extremely overgrown Yes No
2. Nails long Yes No

Nails penetrate pads (Describe; inflammation, pain?)

Nails interfering with normal gait. Yes No

Skin Wounds and Scars. Hair coat

Skin Wounds and Scars. Hair coat

Recent wounds – Red marks

Scars – Blue marks

Note: Ears removed from lateral views so that wounds/scars under ears can be diagrammed.
The Forensic Exam

• Other information to document during the forensic exam includes:
  • Signalment
    • Species, breed, sex, age
  • Also note other descriptors and distinguishing characteristics such as coat pattern and color, special markings, tattoos, microchip, etc
  • Animal identification information
    • BCS
    • Weight

The Forensic Exam

• Estimating age
  • Based on dentition

<table>
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<tr>
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<th>Canine Deciduous Teeth (age in weeks)</th>
<th>Canine Permanent Teeth (age in months)</th>
<th>Feline Deciduous Teeth (age in weeks)</th>
<th>Feline Permanent Teeth (age in months)</th>
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<td>4-6</td>
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</table>

References:

The Forensic Exam

• All animals should be scanned for a microchip
  • Use a universal scanner
  • Make sure:
    • Batteries are not low
    • Using good scanning technique
      • Hold button down during entire scan
      • Hold scanner very close to or touching the animal
      • Scan slow in a serpentine pattern
      • Scan the entire area highlighted in the picture to the right
      • Scan more than once

The Forensic Exam

• Animal identification
  • All animals should be given a unique individual number
  • This number may be assigned by law enforcement or the veterinarian
  • This number should be placed on the animal either:
    • Temporarily
      • Collar
    • Permanently
      • Microchip

The Forensic Exam

• Body Condition Scoring (BCS)
  • Many BCS scales are available
  • Purina has a useful BCS scales available for dogs and cats
  • Utilizes a 1-9 scale
    • One being emaciated
    • Nine being obese
  • Must visualize and palpate in order to BCS
The Forensic Exam- Photography

- Forensic photography is utilized to:
  - Identify the victim
  - Show the condition of evidence or injuries at the time of discovery or examination
  - Record and document injuries and evidence that can not be preserved or left unaltered
  - Allow for later review of the evidence
  - Document injuries or conditions and record what they looked like before and after medical intervention
  - Illustrate and supplement a written medical report
  - Demonstrate the absence or presence of alleged injury or findings
  - Present in a court of law, the items of evidence as they were and, in effect, check the testimony being presented

The Forensic Exam - Photographs

- Forensic exam photography
  - First photo of a series should be of a photo board
    - The photo board should include the case number, location, date, and animal ID number
  - The second photo of the series should be of the animal and contain the photo board
  - Subsequent photos do not need to contain the photo board
    - May want to consider using a smaller label in subsequent photos

The Forensic Exam - Photography

- Forensic photography
  - Basics
    - Digital SLR (ideally) or point and shoot
      - If utilizing a point and shoot you should be no closer than 4 feet from the subject/object. Use optical zoom for close-ups
    - Camera should be parallel or at a ninety degree angle to subject/object in order to prevent distortion

The Forensic Exam - Photography

- Forensic exam photography
  - Overalls
    - Photographs of the entire animal
      - Cranial, caudal, dorsal, right lateral, left lateral, and ventral
  - Orientation
    - Reference photo used to identify the location of an item of interest
  - Close-ups
    - Detailed photograph of an item of interest
      - Photo with and without a scale
        - This is done to show that you are not covering anything with the scale
The Forensic Exam - Photography

- The forensic ruler or scale should be placed in the same plane as the item being photographed.
- Purpose of the forensic ruler:
  - Color
  - Distortion
  - Measurements
  - Focus

- Forensic photos must be a clear and accurate representation of what you observed.

The Forensic Exam – Physical Evidence Collection

- Physical evidence may be removed (collected) from an animal during the forensic exam.
- Evidence is used to establish the facts of a crime.
  - Forensic evidence is often lost because medical personnel are not aware of its presence or potential value.
  - Evidence is also commonly lost due to failure to properly preserve fragile or perishable evidence.

- Physical evidence includes:
  - Biological
  - Firearms
  - Toxicology
  - Entomology
  - Impression
  - Trace

- Must ensure that evidence is being properly collected.
- Must ensure that evidence is being properly stored.
- Must maintain the items integrity.

*Ventral photo not included

*Also should include a picture without the scale

Victim ↔ Suspect
Physical Evidence ↔ Object ↔ Crime Scene
The Forensic Exam – Physical Evidence Collection

- Evidence must be properly stored
  - Paper evidence bags or envelopes should be used instead of plastic bags in many instances as many items will mold if stored in a plastic bag due to the build up of moisture, which will damage the evidence many times rendering it useless
- Accelerants should be placed in a special container for arson evidence or an uncoated paint can

The Forensic Exam – Physical Evidence Collection

- Evidence must be accounted for at all times in order to prove that the item was not tampered with and is in fact the item that was removed from the crime scene or animal
- Chain of custody
  - Protocols must be established to ensure that evidence is unaltered
  - Chain of custody refers to the chronological documentation, and/or paper trail, showing the seizure, custody, control, transfer, analysis, and disposition of evidence

The Forensic Exam – Physical Evidence Collection

- An item of evidence must always be accompanied by its original chain of custody form
  - The animal is evidence, as is any physical evidence that may be taken or removed from the animal. Therefore, the animal must have an evidence receipt just as a buccal swab collected from the animal would need to have an evidence receipt.

Sample Chain of Custody Form

Putting it All Together – The Forensic Medical Report

- Assessment of the evidence
  - The veterinary medical examiner will determine an opinion based on the facts of a case
- The responsibility to “prove” a case does not lie on the veterinarian alone
- Ultimately the judge or jury is the trier of fact
The Forensic Medical Report

- The purpose of the forensic medical report is to clearly convey what has or has not happened to a victim based on science and fact, in order to assist the judge and/or jury in understanding the evidence.

- The veterinarian must ensure that the court understands the evidence at hand and act as an advocate for the truth.

- But must be aware of their limitations and the gaps in veterinary forensic knowledge.

- The veterinarian must be impartial and only draw conclusions based on what the evidence shows.

The Forensic Medical Report

- The necessary components of a forensic medical report:
  - Introduction
    - Should include the following:
      - Investigating agency, lead officer, this agency's case number and animal identification number.
      - Reason for the exam.
      - Date, time and location of the exam.
      - Signalment and other identifying information regarding the animal.
      - Crime Scene Findings.
      - Personal observations or information provided.
      - History.
      - A medical history for the animal may or may not be available.

- Additionally, it may be beneficial to summarize findings and opinions in conjunction with photos in order to enhance understanding and further illustrate the magnitude of the condition.

- All original documents and photos must be maintained.

- Remember that all emails, photos, notes, and any other documents or evidence related to a case are discoverable and should be maintained and provided as requested.

- With this in mind, you should always approach all aspects of the case in an unbiased and professional manner.