Lecture summaries

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Improving trauma patient outcomes: The VetATLS

What is your level of comfort when the client services team gives you and your team the "heads up" that a hit by car dog is on its way to your clinic? How about when they relay a cat that was just attacked by a dog in enroute to your clinic? As a common reason dogs and cats present to veterinarians, and a leading cause of death, traumatic injury cases can be nerve-wracking, challenging, rewarding, and allow for team building and growth. Join us as we review the approach to a veterinary trauma case and explore a variety of common manifestations of trauma cases. Spectrum of Care, Veterinary Advance Trauma Life Support resources, and front-line veterinarians experience will all be leveraged in this session with a primary goal of improving confidence and competence for attendees in managing dog and cat trauma cases.

Learning goals

1. Apply the VetATLS framework for approaching veterinary trauma patients.
2. Identify and apply resources that can be leveraged to reduce cognitive load during trauma patient stabilization.
3. Describe how hospital preparation facilitates rapid resuscitation of trauma patients.
4. Explain the principles of the primary survey and interventions that may be immediately required.
5. Identify the components of a secondary survey, including adjuncts that may be appropriate during its performance and pitfalls.

Resuscitation of the acutely haemorrhaging patient (case presentation)

An 8-year-old, male neutered Shepherd dog, *Joust*, arrives to your clinic for acute “lethargy”. He was missing for a few hours and returns home right after a truck dropped a package off. He “seems off” and “wobbly” to his owners, so they bring him straight to your clinic (they are long time clients with a multi-pet household and donated $3 million to your new hospital wing). Joust was diagnosed with immune-mediated thrombocytopenia 2 years ago (weaned off medications 12 months ago), has access to anti-coagulant rodenticide (lives on an old farm), and loves chasing the horses on the property.

On primary survey, he has no evidence of external red pulsatile bleeding (X), he has no evidence of abnormal airway sounds (A), and he has a rapid shallow breathing pattern with normal lung sound (B). His mucous membranes are pale pink/capillary refill time is 2-3 seconds; he is tachycardic (HR 160) with weak femoral pulses (C). You verbalize to your team that *Joust* is in shock and request your team to place an intravenous catheter (IVC) and to start an intravenous fluid bolus of…*** while you move on to the rest of your primary survey (D, E: dull mentation, toe sensation x 4; no evidence of open wounds, rectal temperature=99°F/37.2°C).

On secondary survey, abdominal Point of Care Ultrasound (POCUS) reveals an abdominal fluid score (AFS) of 3, and no evidence of pericardial effusion through the diaphragmatic-hepatic view. Fluid obtained on abdominocentesis appears to be frank blood

(PCV and protein levels – pending). Joust collapses as the IVC is finished being secured by your team.

***What fluid is chosen first? Next? Why?

***What bedside tests might help inform your choice?

This session will highlight pre-clinical and human research regarding earlier use of plasma to attenuate endothelial injury, and the evidence supporting hemorrhage resuscitation strategies that are recommended (and not yet universally applied in veterinary medicine). Barriers for implementing the recommendations, and future opportunities will also be presented.

Learning goals

By the end of the session, the learner will be able to:

1. Describe pre-clinical and human research-based recommendations for resuscitating acutely hemorrhaging small animal patients, with a focus on dogs, and some on cats.
2. Identify potential barriers to implementation, as well as opportunities for barrier reduction regarding resuscitation recommendations for the acutely hemorrhaging patient.
3. Identify clinical markers for determination of need for hemostatic resuscitation in dogs.

LITERATURE - VetCOT Studies - What have we learnt and how to be involved

Trauma accounts for 10-25% of cases presenting to veterinary practitioners across practice types. Additionally, trauma is a leading cause of death in dogs and cats - particularly young otherwise healthy animals. In this presentation, an overview of the Veterinary Committee on Trauma (VetCOT) efforts and impacts (so far) will be shared. This session will review many of the articles that have been published leveraging the ACVECC-Veterinary Committee on Trauma (VetCOT) trauma registry (vetcot.org). The VetCOT registry has accumulated data on > 75,000 dog and cat trauma cases in the last decade and over 30 peer reviewed publications have leveraged data from the registry. As the VetCOT works collaboratively to continually improve trauma patient care, understanding the epidemiology of veterinary trauma is a critical first step. Articles will be contextualized with respect to "what could be next", as collaborative efforts to advance and improve trauma care in pets and people expand.

Learning goals

1. By the end of the session, the learner will have a better understanding of the VetCOT Registry's contributions to better understanding the following regarding veterinary trauma care:

a. Trauma epidemiology and characteristics of injury patterns

b. Trauma severity scoring and physiologic predictors of care interventions

c. Similarities and differences between cats and dogs sustaining traumatic injury

d. Impact of the registry on broader translational trauma efforts