



Veterinary Care & Specialty Group

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24/7/365



VCSG

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September 2021

In this edition.....

CE Conference Wrap-up (p. 1)

CE Conference Sponsors (p. 2)

Ask the Vet (p. 2-3)

Journal Club (p. 1)

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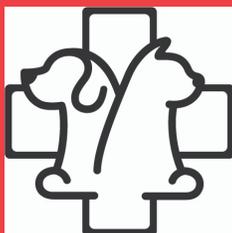
Journal Club

Wednesday, October 6

8:30 a.m.

Dr. Amy Tamulevicus

Details coming soon on our website.



CE Conference Wrap-up

Veterinary Care and Specialty Group Fifth Annual Continuing Education Conference 2021 was held on August 21, 2021.

Sponsored by Daisy's Tale, we were delighted to have some attendees in person at VCSG, in addition to online participants.

Craig Datz, DVM, MS, DABVP, DACVN and Christiane Massicotte, DVM, MS, PhD, DACVIM (Neurology) and Jeff Peck, DVM, DACVS, Founding Fellow, Joint Replacement Surgery - were brilliant in making our CE Conference so special!

Thank you!

We are grateful to our generous sponsors (see page 2). We could not have done this without them!



Dr. Billy Pullen, Dr. Christiane Massicotte, Dr. Jeff Peck



Dr. Craig Datz, Rachael Craven, Dr. Doug Yanik



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Vader's Friends of the Month



Vader Pullen

Ask The Vet: SNAKE ENVENOMATION

Wayne Zuvers, DVM

Dr. Zuvers is an Emergency Room Doctor at VCSG



Well, the summer is here and so are the heat and beautiful weather! Unfortunately, not all the things that summer offers are good. Summer brings out heatstroke in animals and those pesky critters that cause nothing but problems for both people and animals. Yes, snake season is upon us, and exposure to these venomous animals appears to be problematic for both people and animals.

The most common venomous snakes located in North Georgia and Tennessee include the Southern copperhead, timber rattlesnake, the Eastern diamondback rattlesnake, pigmy rattlesnake, and the cottonmouth. These snakes may cause serious harm with exposure. Many snakes are looking for an area in which to cool down. Most snakes do not like to be seen out in public areas and many exposures come from accidental exposure from accidentally stepping on a snake camouflaged in the leaves to a dog sticking his head underneath a rock or log. Most snakebites in dogs occur to the face and paws, subject to the inquisitive nature of the dog.

What is the big deal with a snakebite? Clinical signs may vary, but the most common clinical signs include hypovolemic shock induced by the lethal polypeptide components of Crotalidae venom (endothelial cells become damaged, allowing plasma to exude, blood to extravasate into the surrounding tissues, and third spacing), coagulopathies, and thrombocytopenia (due to platelet consumption). The toxicity of the envenomation varies, depending upon the species of snake and the amount of venom injected.

Diagnosis of snake envenomation is usually based upon history and visual verification that a snakebite occurred. Occasionally, there may be instances in which the bite is not observed. Occasionally the wounds may not be seen or found. The patient may exhibit excessive bleeding, erythema, petechiation, ecchymosis, extremely painful swelling, weakness, nausea, vomiting, shock, muscle weakness, sometimes seizures, and death. Clinical signs may occur within 30-60 minutes or may be delayed in onset for 24-72 hours following the bite. With dry bites (minimal or no envenomation), there are few signs present.

VETERINARY CARE & SPECIALTY GROUP FIFTH ANNUAL CONTINUING EDUCATION CONFERENCE AUGUST 21, 2021

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- Threads Signal Mountain
- TransMed South





(Continued from previous page)

A complete lab work-up is recommended including a CBC, urinalysis, baseline PT/PTT, and a blood smear to look for echinocytes (red blood cells with spikes to their outer membranes). It is important to remember that echinocytes can be present up to 24 hours post envenomation. They may disappear within 48-72 hours of exposure and for some, they may not appear at all. Treatment of envenomation should not be placed on the presence or absence of echinocytes. If a PT/PTT cannot be performed, an activated coagulation time (ACT) can be performed. Urinalysis may reveal myoglobinuria or hemoglobinuria.

Treatment of snake envenomation is directed at treating the clinical signs and minimizing the effects of the envenomation. Telephone callers should be advised to try to immobilize the affected limb if bitten on an extremity, to restrict the patient's activity, and to bring it to a veterinary hospital immediately. **DO NOT, UNDER ANY CIRCUMSTANCES, APPLY A TOURNIQUET OR ICE TO THE AREA.** Snake capture is not recommended. On entry to a veterinary hospital, the patient should be immediately assessed and treated for pain. Intravenous fluid therapy should be administered to treat shock, and antivenom should be administered to prevent the problems associated with coagulopathy. Consider a minimum dose of two vials for small patients, or those exhibiting signs of severe shock. The antivenom should be diluted and administered slowly when started but increased as soon as possible to deactivate all circulating venom to mitigate clinical signs. Animals with bites to the trunk or thorax tend to experience a much more severe clinical course. These animals should be carefully monitored. Owners should be warned that multiple vials of antivenom may be needed. Extensive wound necrosis may ensue, so rapid administration of antivenom is key. Antivenom is clinically useful as many as 3-5 days post envenomation. There is no reason to pre-treat with Dexamethasone or Diphenhydramine. Should the patient experience signs of an allergic reaction, temporarily discontinue the antivenom, treat accordingly, and resume the infusion slowly. The routine use of antibiotics is not indicated for facial wounds. For a distal extremity wound that is likely to be contaminated, cephalosporin or potentiated ampicillin could be administered.

Fresh frozen plasma is not indicated for management of snake envenomation. If a coagulopathy develops, more antivenom is indicated. Low total protein/albumin is likely secondary to blood loss/systemic inflammation and treating the primary disease process is key.

Red Rock Biologics created a rattlesnake vaccine several years ago, but its efficacy has been called into question. It was initially reported that those animals that received the vaccine would not require antivenom therapy if bitten, but this has proven to be false. As of the current date, there is no evidence that the vaccine is helpful. Antivenom therapy and immediate treatment are still recommended.

In summary, the standard of care should include:

1. Analgesia
2. IV catheter placement and shock fluid therapy
3. Antivenom
4. Monitor coagulation times (on entry and 2-4 hours post antivenom)
5. Treat any coagulopathy with more antivenom, not fresh frozen plasma
6. Hospitalization and monitoring

It is important to also minimize areas in which snakes hide. All shrubbery should be trimmed and well maintained; long grass should be cut short, and leaves should be raked to keep the yards free from debris. Log piles should be dismantled. Caution and care while hiking is still the best preventative care and keeping your pet on a short, non-retractable leash is the best medicine.