
New Treatment
for Crotalid Envenomation

Incidence of Crotalid Envenomation

Venomous snakes are found in all states of the contigous US. The southwestern and southeastern United States have a greater incidence of snakebites due to a higher population of venomous snakes from the family of snakes known as crotalids. Data suggests that these bites affect over 150,000 dogs and cats per year and those are just the bites that are reported. Most snakebites occur in large breed primarily outdoor dogs Practically all bites occur during the spring and summer seasons. It is estimated that 90% of bites occur between April and mid October. Bites from these snakes are generally the result of aggressive or curious actions while playing in snake-infested areas.

Crotalidae Prevelance

The Crotalidae family of the venomous snakes is the most prevalent in the United States. Included among the crotalids are all species of:

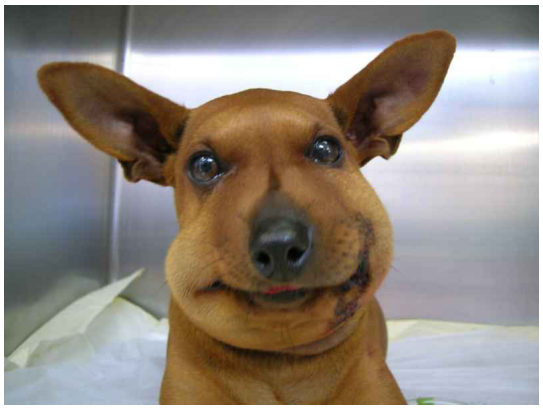
Rattlesnakes
Copperheads
Cottonmouth/Water Mocassin

The crotalid class of viper accounts for approximately 99% of all venomous snake bites to pets.

Venom Toxicity

The toxicity of the venom varies from species to species, with the rattlesnake being the most toxic. Each snake's venom contains more than one toxin, and in combination the toxins have a more potent effect than the sum of their individual effects. Neurotoxic venom affects the central nervous system which can lead to muscle weakness and paralysis. Hemotoxic venoms cause cardiovascular problems, including direct effects on cardiac tissue, blood vessels, blood cells and coagulation..

Snakebite Wounds



The majority of snakebite wounds are located in the area of the head, especially the muzzle. Where severe swelling can occur, tissue swelling is often worse 24 to 48 hours after the bite.

Clinical signs associated with the bite may include puncture wounds.

In addition to the head bites to the leg are also common. Often times these wounds will lead to sloughing of the tissue along with cyanosis. Wounds may drain and bleed for several days. In addition to swelling linical symptoms will commonly reveal severe pain, muscular weakness, dyspnea, impaired vision, hemolytic anemia and shock.

Veterinary Care

Once a dog that has been envenomated reaches the veterinary hospital, a treatment regimen will typically be initiated that would include

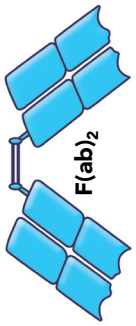
- **Antivenom Therapy**
- **IV Fluids**
- **Pain Medication**
- **Antibitotics**

New Venom Vet™

Equine Origin Polyvalent Crotalidae Injectable Antivenin Solution
Ready-to-Use, No Reconstitution Necessary

VENOM VET ™ Description
Venom Vet™ is obtained from the blood of healthy horses who have been immunized with crotalid venoms. It is a polyvalent anti-venom treatment that is produced under sterile and non-pyrogenic conditions.

$F(ab)_2$ Technology
Venom Vet is an F(ab)2 fragment technology based product that is created by a pepsin digestion of purified IgG. It has a longer half life and remains in the vascular compartment longer than F(ab) technology based products. Another significant difference is that it has two antigen binding sites per molecule. Venom Vet™ works by binding and neutralizing venom toxins. Once neutralized it facilitates the redistribution of the neutralized toxins away from target tissues and they are then eliminated from the body.



From a saftey standpoint the technology fully eliminates the Fc fragment. This significantly reduces hypersensitivity reactions during administration to envenomation victims.

VENOM VET ™ Indications
Venom Vet™ is indicated for the management of minimal to severe North American crotalid envenomation in dogs 6 months of age and older. This would include envenomation from all rattlesnakes, copperheads and cottonmouths/water moccasins.

VENOM VET ™ Indications
Early use of Venom Vet™ (within 6 hours of snakebite) has been shown to be effective in stabilizing and reducing the clinical deterioration and the occurrence on toxicity of a dog's:

CELLS
MUSCLES
NERVES
BLOOD CELLS

VENOM VET ™ Use Directions
Venom Vet™ DOES NOT REQUIRE Reconstitution. It is ready to use. It is recommended to mix each vial of Venom Vet™ with 100ml –150 mL of Sterile Saline. Completed infusions can be reached at 30 minutes – 1 hour. The product must not be injected at the site of the bite or perifocal area. The number of 10 mL vials used on each envenomation victim will vary. Dosage will be based upon the severity classification of each case, including veterinary clinical judgment, snakebite severity score and coagulation times.

The decision to discontinue treatment depends upon the normalization of the state of the patient along with the resolution of all symptoms, which indicates neutralized venom activity.

ANTIVENIN, CROTALIDAE POLIVALENT, EQUINE ORIGIN

VENOM VET™

Injectable Solution

INDICATIONS AND USAGE:
Venom Vet™ is indicated for the management of canines of a minimum age of six months with minimal to severe North American crotalid envenomation. The term crotalid is used to describe the Crotalinae subfamily (formerly known as Crotalidae) of venomous snakes which includes rattlesnakes, copperheads and cottonmouths/water moccasins. Early use of Venom Vet™ (within 6 hours of snakebite) has been shown to be effective in stabilizing and reducing clinical deterioration and the occurrence of systemic cytotoxicity, neurotoxicity, myotoxicity and hemotoxicity.

DESCRIPTION - VENOM VET™:
Equine derived Crotalidae Polyvalent Immune F(ab)2 is a sterile, nonpyrogenic, purified preparation of polyvalent equine immunoglobulin obtained from the blood of healthy horses immunized with the following snake venoms: *Bothrops alternatus, Bothrops diporus (previous name: Bothrops neuwiedi) (fer-de-lance), Lachesis muta (lancehead), Crotalus durissus terrificus (South American rattlesnake) and Crotalus simus (previous name: Crotalus durissus durissus).*
This product also contains sodium chloride and phenol.

DOSAGE AND ADMINISTRATION:
Restricted to use by or under the direction of a veterinarian.
It is recommended to mix each vial of antivenin with 100ml – 150mls of a crystalloid fluid and administer IV slowly while taking into consideration the patient's weight and overall fluid load. Completed infusions can be reached at 30 minutes – 1 hour.
As with other equine derived antivenins, monitor the patient closely over the first 10 minutes for signs of hypersensitivity reactions. If one occurs then stop the infusion and when safe to resume, administer at a slower rate.
The number of 10ml vials used on each patient will vary and will be based upon the severity classification of each case, your clinical judgment, the snakebite severity score and coagulation times.
Discontinuation of treatment depends upon the normalization of the state of the patient and resolution of all symptoms, which indicates neutralized venom activity.
The product must not be injected at the site of the bite or perifocal area.

ADVERSE REACTIONS:
As with any equine derived antivenin, adverse reactions may occur, including life threatening anaphylactic and anaphylactoid reactions. Medical veterinary care must be available during and after the administration of Venom Vet™. Anaphylactic (Type 1 Hypersensitivity) and anaphylactoid reactions may be characterized by hypotension, respiratory distress, vomiting, diarrhea, angioedema, urticaria and wheals, pruritis and fever. Delayed hypersensitivity reactions can also occur requiring patient monitoring post-treatment.

CONTRAINDICATIONS/ WARNINGS AND PRECAUTIONS:
Venom Vet™ should not be administered to patients known to be sensitive to equine derived antivenins/equine serum. Only administer Venom Vet™ if the potential benefits outweigh the risks and medical management is immediately available. Severe, immediate allergic reactions (anaphylaxis and anaphylactoid) may be seen.

CONSIDER ADDITIONAL TREATMENT:
Appropriate antibacterial/tetanus prophylaxis is indicated for patients suspected of having puncture wounds.

CLINICAL PHARMACOLOGY / MECHANISM OF ACTION:
Venom Vet™ is a F(ab)2 fragment created by a pepsin digestion of purified IgG that works by binding and neutralizing venom toxins, facilitating their redistribution away from target tissues and their elimination from the body.

Each box contains one 10ml dose.

Keep this medication refrigerated between 36º- 46ºF (2º- 8ºC)

KEEP OUT OF REACH OF CHILDREN.

Unused antivenin should be autoclaved or incinerated before disposal.

Restricted to use by or under the direction of a veterinarian.

This package is not returnable for credit or exchange.

Argentine Industry
Produced for and imported by permittee: MT Venom LLC
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Manufacturing Plant: 606 Calle Dr. Dessy 351 (B1867DWE) Florencio Varela, Buenos Aires. Republica Argentina. Authorized Person: Anabella M. Martinez pharmacist

U.S. Permit No. **444-A**

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