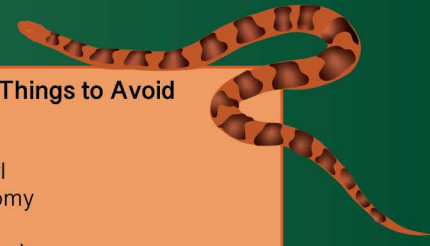


NORTH AMERICAN VETERINARY PIT VIPER TREATMENT ALGORITHM



1 Assess Patient

- Perform full physical exam
- Shave bitten area if known
- Obtain initial lab studies (CBC [platelets], chemistry, coags [PT/PTT, ACT], blood film [confirm platelets, echinocytes], creatine kinase)
- Blood pressure

2 Check for Signs of Envenomation

- Puncture wounds, pain, bleeding, bruising, swelling, redness
- Hemotoxicity (prolonged coags, low platelets)
- Systemic signs (hypotension, shock, neurotoxicity, bleeding, severe pain, vomiting and/or diarrhea)
- Early/immediate necrosis
- Monitor for pigmenturia (avoid cystocentesis for urinalysis)

3 Check for Indications for Antivenom

- Progressive swelling or significant local tissue injury
- Hemotoxicity (prolonged coags, low platelets)
- Any systemic signs

<p>Mild (see Box 12)</p> <ul style="list-style-type: none"> • Mild to moderate pain • Mild to moderate swelling/bruising • Normal coags/platelets • No acute bleeding • No hemolysis • No GI signs 	<p>Moderate (see Box 12)</p> <ul style="list-style-type: none"> • Moderate to severe pain • Moderate to severe swelling/bruising • Prolonged coags • Marked thrombocytopenia • Mild to moderate bleeding 	<p>Severe (see Box 13)</p> <ul style="list-style-type: none"> • Unstable patient • Hypotension • Obtunded/neurotoxicity • Dyspneic • Severe bleeding/coagulopathy • Vomiting/hematemesis • Diarrhea/hematochezia
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4 Administer Antivenom

- Prepare antivenom according to manufacturer instructions

<p>Venom Vet™ or ACP: Dose based on severity of envenomation</p> <ul style="list-style-type: none"> • Mild: Administer 1-2 vials over 1 hr • Moderate: Administer 2-4 vials over 30-60 mins • Severe: Administer 2-6 vials over no more than 30 mins 	<p>Rattler Antivenin™ (must be given through blood filter)</p> <ul style="list-style-type: none"> • Mild: Administer 1 bag over 1 hr • Moderate: Administer 1 bag over 30-60 mins • Severe: Administer 1-2 bags over no more than 30 mins
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- Monitor for adverse reactions (rare)
- For suspected shock/allergic reaction, see Box 14**

5 Determine if Control is Achieved

- Swelling and tenderness not progressing
- Bloodwork improving/resolved
- Clinically stable
- Neurotoxicity improving/resolved

Yes

6 Monitor Patient

- Perform serial examinations
- Recheck swelling/wound
- Pain scale
- Blood pressure
- Recheck labs in 4-6 hrs (coags, platelet count, and PCV/TS or CBC)

If patient develops new or worsening symptoms, return to Box 3

11 Additional Antivenom

- Repeat steps 4 and 5 until control is achieved

Be cautious of fluid overload in cats and small dogs when administering multiple doses of diluted VenomVet™ or ACP, or multiple bags of Rattler Antivenin™

7 Determine if Patient Meets Discharge Criteria

- No progression of venom effects
- No unfavorable laboratory trends

9 Apparent Dry Bite/No Bite

- Do not administer antivenom
- Observe patient ≥ 8 hrs
- Repeat labs prior to discharge

If patient develops signs of envenomation, return to Box 2

10 Apparent Minor Envenomation

- Do not administer antivenom
- Observe patient 12-24 hrs
- Repeat labs at 4-6 hrs and prior to discharge

If patient develops progression of any signs of envenomation, return to Box 3



8 Discharge Instructions

- Monitor for swelling, bleeding, redness, necrosis (blackening of skin), infection (pus, pain), serum sickness (rash, vomiting, diarrhea, joint pain, fever)
- Pain medications: gabapentin, tramadol, fentanyl patch, codeine
- Wound care with primary vet or referral to specialist
- Antibiotics are indicated where evidence of active infection is present
- For patients with severe envenomation, recheck bloodwork 48 hrs post-discharge

Things to Avoid

- NSAIDs
- Steroids
- Benadryl
- Fasciotomy
- Ice
- Tourniquets
- Cutting/suctioning of bites
- Electric shock
- Prophylactic antibiotics

12 If Patient is Stable

- IV catheter
- Administer analgesia (fully reversible opioids preferred)
- IV fluids

Administer antivenom per instructions in Box 4

13 If Patient is Unstable

- Bolus IV crystalloids 10-20 ml/kg, repeat PRN
- Oxygen supplementation or ventilation if needed
- Vasopressors if unresponsive to antivenom and fluid boluses
- Blood products only if severe acute hemorrhage or severe hemolysis
- Antiarrhythmics (lidocaine, procainamide)
- Benzodiazepines (for seizures)

Administer antivenom per instructions in Box 4

14 Adverse Reactions

- Monitor for urticaria, angioedema, circulatory collapse
 - GI signs more common in dogs
 - Respiratory distress more common in cats

Treat allergic/anaphylactic reaction (0.01ml/kg epinephrine IM, then CRI @ 0.05 mcg/kg/min and titrate as needed)

Diphenhydramine 2-4 mg/kg IM +/- anti-inflammatory dose of steroid

Contact National Snakebite Support for additional guidance: <https://www.facebook.com/groups/national.snakebite.support>
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