

Marine Envenomations / Injury

History

- Type of bite / sting
- Identification of organism
- Previous reaction to marine organism
- Immunocompromised
- Household pet





Signs and Symptoms

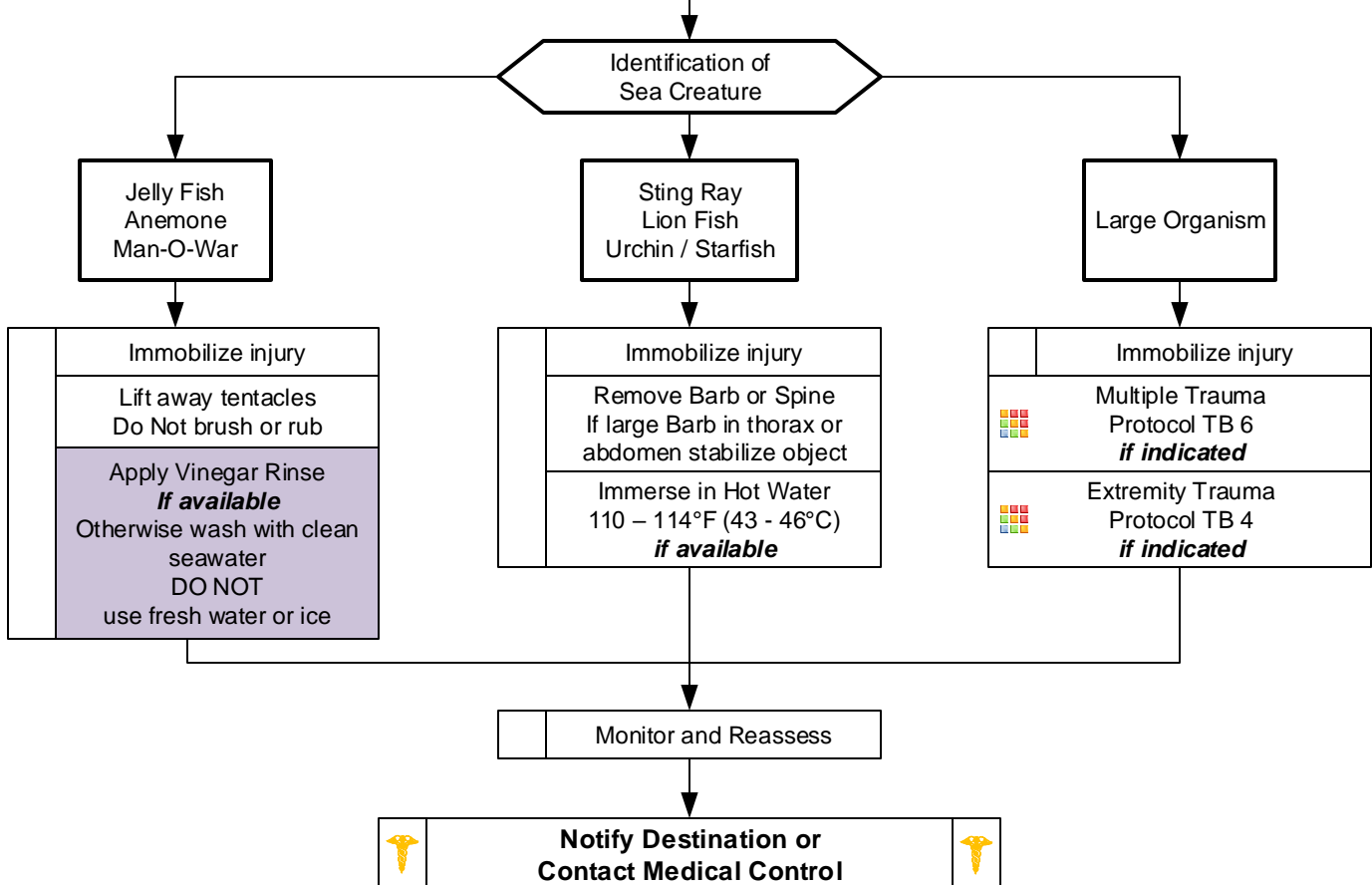
- Intense localized pain
- Increased oral secretions
- Nausea / vomiting
- Abdominal cramping
- Allergic reaction / anaphylaxis

Differential

- Jellyfish sting
- Sea Urchin sting
- Sting ray barb
- Coral sting
- Swimmers itch
- Cone Shell sting
- Fish bite
- Lion Fish sting

If Needed
Carolinas Poison Control
1-800-222-1222

	General Wound Care Procedure
A	IV / IO Procedure <i>if indicated</i>
P	Cardiac Monitor <i>if indicated</i>
	Drowning Protocol TE 3 <i>if indicated</i>
	Age Appropriate Allergy / Anaphylaxis Protocol AM 1 / PM 1 <i>if indicated</i>
	Age Appropriate Hypotension / Shock Protocol AM 5 / PM 3 <i>if indicated</i>
	Pain Control Protocol UP 11 <i>if indicated</i>



Toxic-Environmental Protocol Section

Marine Envenomations / Injury

Pearls

- **Ensure your safety: Avoid the organism or fragments of the organism as they may impart further sting / injury.**
- **Priority is removal of the patient from the water to prevent drowning.**
- **Coral:**
 - Coral is covered by various living organisms which are easily dislodged from the structure.
 - Victim may swim into coral causing small cuts and abrasions and the coral may enter to cuts causing little if any symptoms initially.
 - The next 24 – 48 hours may reveal an inflammatory reaction with swelling, redness, itching, tenderness and ulceration.
 - Treatment is flushing with large amounts of fresh water or soapy water then repeating
- **Jelly Fish / Anemone / Man-O-War:**
 - Wash the area with fresh seawater to remove tentacles and nematocysts.
 - Do not apply fresh water or ice as this will cause nematocysts firing as well.
 - Recent evidence does not demonstrate a clear choice of any solution that neutralizes nematocysts.
 - Vinegar (immersion for 30 seconds), 50:50 mixture of Baking Soda and Seawater, and even meat tenderizer may have similar effects.
 - Immersion in warm water for 20 minutes, 110 – 114°F (43 - 46°C), has recently been shown to be effective in pain control.
 - Shaving cream may be useful in removing the tentacles and nematocysts with a sharp edge (card).
 - Stimulation of the nematocysts by pressure or rubbing cause the nematocyst to fire even if detached from the jellyfish.
 - Lift away tentacles as scrapping or rubbing will cause nematocysts firing.
 - Typically symptoms are immediate stinging sensation on contact, intensity increases over 10 minutes.
 - Redness and itching usually occur.
 - Papules, vesicles and pustules may be noted and ulcers may form on the skin.
 - Increased oral secretions and gastrointestinal cramping, nausea, pain or vomiting may occur.
 - Muscle spasm, respiratory and cardiovascular collapse may follow.
- **Lionfish:**
 - In North Carolina this would typically occur in the home as they are often kept as pets in saltwater aquariums.
 - Remove any obvious protruding spines and irrigate area with copious amounts of saline.
 - The venom is heat labile so immersion in hot water, 110 – 114 degrees for 30 to 90 minutes is the treatment of choice but do not delay transport if indicated.
- **Stingrays:**
 - Typical injury is swimmer stepping on ray and muscular tail drives 1 – 4 barbs into victim.
 - Venom released when barb is broken.
 - Typical symptoms are immediate pain which increases over 1 – 2 hours. Bleeding may be profuse due to deep puncture wound.
 - Nausea, vomiting, diarrhea, muscle cramping and increased urination and salivation may occur.
 - Seizures, hypotension and respiratory or cardiovascular collapse may occur.
 - Irrigate wound with saline. Extract the spine or barb unless in the abdomen or thorax, contact medical control for advise.
 - Immersion in hot water if available for 30 to 90 minutes but do not delay transport.
- Patients can suffer cardiovascular collapse from both the venom and / or anaphylaxis even in seemingly minor envenomations.
- Sea creature stings and bites impart moderate to severe pain.
- Arrest the envenomation by inactivation of the venom as appropriate.
- Ensure good wound care, immobilization and pain control.