# Venomous Fish Stings

## PATIENT CRITERIA:

Stings from venomous fish include lionfish, scorpionfish and stonefish. Stings that occur in waters with poor visibility and known to have venomous fish should be regarded as potential fish envenomation and treated according to this protocol. While there has been no cases reported in the medical literature of anaphylaxis secondary to lionfish there is a possibility that this may occur after repeated exposures. Anaphylaxis protocols should be followed for symptoms consistent with anaphylaxis. Mild to severe pain may be reported at the site of the puncture wound. Venomous fish toxins are of the neuromuscular type and can cause a variety of other systemic symptoms including headache, nausea, vomiting, abdominal pain or cramping, delirium, seizures, limb paralysis, hyper or hypotension, respiratory distress, dysrhythmia, myocardial ischemia, congestive heart failure, pulmonary edema, tremors, muscle weakness and syncope. Pain that worsens hours or days after initial improvement with hot water treatment may indicate secondary infection. Although painful, local treatment with hot water generally relieves pain in most cases.

## REQUIRED ASSESSMENT:

- Focused History & Physical to include vital signs.
- Examination of the skin for puncture wounds and/or vesicles.
- Auscultation of Lung sounds for wheezing or stridor.
- Document location, distribution of skin lesions and obtain full history of event and any similar past events.
- Measure areas of redness or swelling and record for future reference.
- Strength testing and sensory testing.

## INTERVENTION:

- Currently there is only antivenin for stonefish and it is available only in the Indo-Pacific region. If in a region where antivenin is available and the injury is thought to be secondary to stonefish or scorpionfish, consider transport to a facility where it may be administered.
- The venom found in these fish is heat labile and generally responds to hot water treatment. If on an extremity that can be immersed, heat water to a temperature of 113 degrees Fahrenheit (45 degrees Celcius), ideally measured with a thermometer, and immerse the extremity in the water for 15 minutes at a time. Otherwise put towels soaked in hot water and apply to the areas affected.
- Treatment with hot water may be repeated.
- If fish spines are suspected to be present in the tissues, call the medical consultant for further instruction.
- Cleanse the wound with povidone iodine (betadine) and dress with mupirocin or triple antibiotic ointment if mupirocin is unavailable.
- **Treatment of mild to moderate pain:** Ibuprofen 400mg PO q.i.d. or Acetaminophen 1000 mg PO q.i.d.
- Update diphtheria/tetanus as needed.

## ALS:

Contact Medical Consultant prior to administering Antibiotics or Narcotics

- **Pain unresponsive to non-steroidal anti-inflammatory agents:** May escalate Ibuprofen to 800 mg PO t.i.d. with unresolved symptoms. If no change in symptoms after administering Ibuprofen, narcotic analgesics may be considered.

## CLINICAL CONSIDERATIONS:

Contact Medical Consultant prior to administering Antibiotics or Narcotics

- **Secondary infection:** Consider antibiotic treatment with Doxycycline 100 mg bid, Ciprofloxacin 500 mg. bid or Trimethoprim/Sulfa 160/800 mg bid for 10 days.
- **Anaphylaxis:** Treat according to standard anaphylaxis protocols using epinephrine (Epipen) and repeat if necessary.

## CONSULTATION & REFERAL CRITERIA:

- Transport will be required for those patients who present with severe symptoms, fever or for those that have pain not responsive to oral medication.
- Transport will be required for those patients that have signs of necrosis.
- Transport may be required for those patients with retained fish spines.
- Transport will be required for areas where antivenin is available for the treatment of systemic symptoms due to stonefish or scorpionfish.