AUSTRALIAN RESUSCITATION COUNCIL

GUIDELINE 9.4.7

ENVENOMATION - FISH STINGS

INTRODUCTION

Many fish have spines with attached venom glands. When trodden upon, the spines of the marine Stonefish (*Synanceia* spp) and the freshwater Bullrout (*Notesthes robusta*) penetrate deeply and deposit venom causing excruciating pain. General cardiovascular toxic effects can occur but are rare. Handling these or similar fish is also potentially dangerous.

The barbed spines on the tails of stingrays can inflict a serious gash or penetrating stab injury with subsequent venom-induced tissue death. Organs and blood vessels may be damaged and fragments of spine may remain in the wound requiring surgical removal. Injuries usually occur when the victim stands on an unseen fish, pulls a captured fish into a boat or swims too closely over a fish on the sea-floor.

RECOGNITION

Symptoms and signs may include:

- intense pain, leading to irrational behaviour
- swelling
- sometimes a local grey/blue discolouration
- an open wound
- bleeding

MANAGEMENT

- Call an ambulance
- If the sting is to the trunk (chest, abdomen), assess the victim for signs of bleeding and treat as per ARC Guideline 9.1.1 Principles of Control of Bleeding for First Aiders
- If there is an embedded object (eg. a barb from a stingray sting), do not remove it as it may be plugging the wound and restricting bleeding. Place padding around or above and below the object and apply pressure over the pads.
- If the sting is to a limb, place the victim's stung hand or foot in hot water (no hotter than the rescuer can comfortably tolerate)[1-8] (Class A, LOE IV).
- Transport the victim to a medical facility.

If the victim is unresponsive and not breathing normally, follow Australian Resuscitation Council and New Zealand Resuscitation Council Basic Life Support Flowchart (ARC Guideline 8).

Note:

DO NOT use the Pressure Immobilisation Technique. Antivenom is available for stonefish envenomation. (LOE IV, CLASS A)

AUSTRALIAN VENOM RESEARCH UNIT

For urgent advice concerning any marine envenomation you can call the Australian Venom Research Unit 24 hour advisory line.

1300 760 451

RATIONALE

Whilst the mechanism is not understood, the local application of heat decreases pain in the majority of cases. The Pressure Immobilisation Technique is not used for fish stings because the venom remains localized at the wound

REFERENCES

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4. Aldred B, Erickson T, Lipscomb J. Lionfish envenomations in an urban wilderness. Wilderness Environ Med 1996; 7: 291-296.
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8. Grandcolas N, Galéa J, Ananda R. et al. Stonefish stings : difficult analgesia and notable risk of complications. [Article in French] Presse Med 2008; 37: 395-400.

FURTHER READING

ARC Guideline 8 Cardiopulmonary Resuscitation
ARC Guideline 9.1.1 Principles of Control of Bleeding for First Aiders