Stingray Sting Stings!

Poster No 33

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Introduction

Stingrays are a group of sea rays, a type of cartilaginous fish closely related to sharks. There are more than 150 species of stingray worldwide, habituating both salt and freshwater. Stingrays had always been considered a speciality delicacy within South East Asia. Despite this, stingray-related injuries in Malaysia are relatively uncommon.

Figure 1: Potamotrygon leopoldi sp.

Case report

A 25 years old stingray enthusiast visited the emergency department for alleged stung on the right hand by his pet stingray while attempting to shave its barb. He complains of swelling and severe throbbing pain radiating up to his arm with a pain score of 8/10. Local examination shows a minuscule puncture wound over the right dorsum, with circumferential swelling up to the wrist level. Xingu River ray (Potamotrygon leopoldi sp) was identified as the perpetrator.

The patient was given immediate local wound care and anti-tetanus toxoid. Xray of the right-hand shows no fracture or foreign bodies. Despite frequent titrating doses of nonsteroidal anti-inflammatory drugs (NSAIDs) and opioids, it was futile to relieve the patient. We proceeded with a trial of hot water immersion of his injured hand, which triumphantly diminished his pain after thirty minutes. He was allowed discharged later on the same day with little to no residual pain.

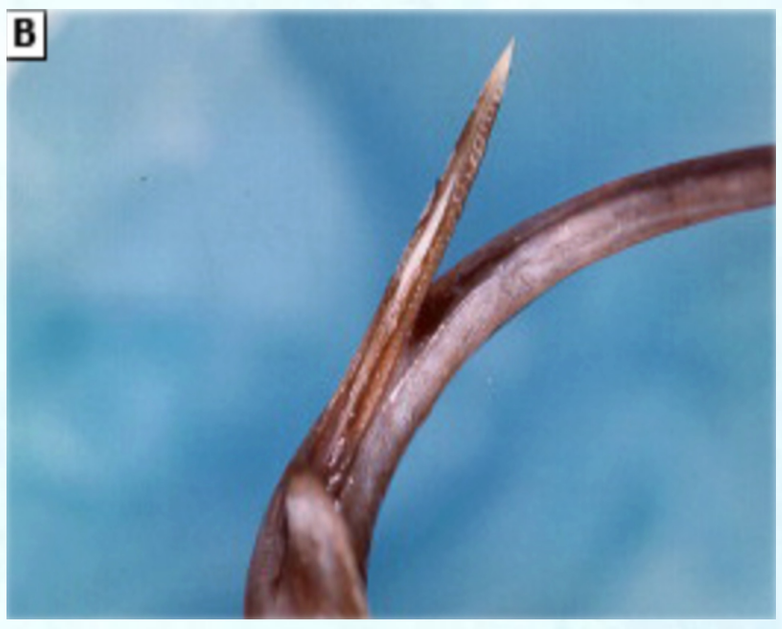

Figure 2: A stingray's barb.

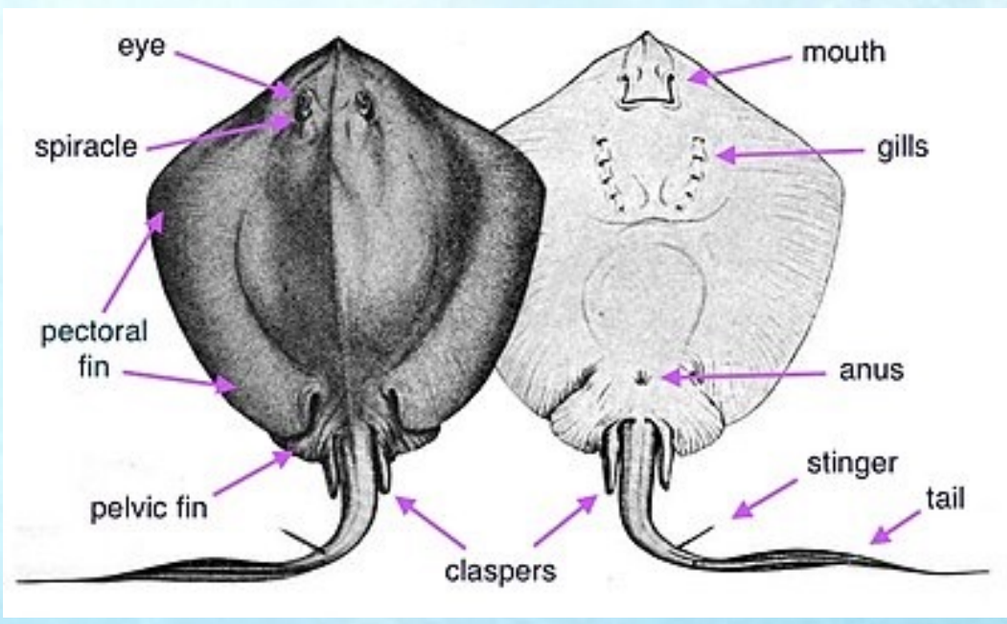

Figure 3: Anatomy of a stingray.

Discussion

Stingrays are not naturally aggressive; in fact, their first instinct is to flee if they feel threatened. There are two mechanisms of stingray stings – Mechanical and venomous injury. The stingray's barb pierces through the skin, resulting in a puncture and jagged laceration wound. Venoms are then released from the serrated spine, causing tremendous pain to the victim, which is the most usual venomous effect.

The first-line treatment for stingray injuries is hot water immersion, as stingray venom is heat-labile and can be quickly inactivated by heat. A 40-45 degrees water temperature or the highest water temperature tolerated on the non-affected limb can be used for immersion. In a retrospective series of 97 patients with stingray envenomation, 67 percent had complete analgesia with hot water immersion alone. Opioids or NSAIDs can be added if pain persists. Local wound care, such as meticulous cleaning of the wound, identifying and removing foreign bodies, and accompanying tetanus prophylaxis, is required as any open wounds.

Reference

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