

Chapter 10

MARINE ENVENOMATIONS

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Introduction

In our country, incidents of marine creatures poisonings and injuries are rarely encountered. Due to global warming, climate change, and environmental alterations, there has been an increase in sea water temperatures, leading to the migration of toxic marine creatures from oceans to the Mediterranean Sea. An increase in organisms such as jellyfish is also observed, and it is predicted that this situation will lead to a rise in sea creatures poisoning and injury cases related to marine animals. While some countries have developed antivenoms against certain marine animal stings, there is currently no research on this topic in our country.

Toxins from venomous marine creatures are a mixture of protein and peptide toxins. The method of poisoning varies depending on the species of the organism. Poisonings can be cytotoxic, neurotoxic, myotoxic, dermatotoxic, or hematotoxic, which may result in symptoms such as pain, burning, and swelling. However, they can also lead to more severe conditions like hypertension, rhabdomyolysis, paralysis, and even death (1). Although most injuries are superficial, puncture wounds caused by certain organisms, especially sea urchins, often occur with foreign bodies and can contaminate the skin. (2)

This article will focus on poisonings caused by marine animals.

Envenomations

Stingrays and Venomous Fish

Stingrays (*Dasyatidae*, *Myliobatidae*, *Gimnuridae*, and *Rhinopteraidae* families), lionfish, and scorpionfish (*Scorpaenidae* family), stonefish (*Synanceia* family), and catfish (*Ariidae*) are examples of venomous fish. They possess various mechanisms to deliver their toxins, including venomous spines on their fins and dorsal needles, toxin-secreting glandular tissues in their body spines and teeth.

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alternative to tetracyclines for children under 8 years old, as tetracyclines can cause permanent teeth discoloration (56).

Topical antihistamines can be used for itchiness caused by marine dermatitis. Although antivenoms are available for stonefish, box jellyfish, and sea snake stings, there is no antivenom available in Turkey. Stonefish antivenom can be used for stings from other venomous fish. Antivenoms, administered intramuscularly or intravenously, should be closely monitored due to the potential for anaphylaxis and allergy, as they are made from horse serum (57,58).

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