From the Beach to the Emergency Room: Sea Anemone Sting

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A previously healthy 9-year-old girl presented to the paediatric emergency department 24 hours after sustaining a presumed plant or marine envenomation while on holiday. She reported sitting on a submerged rock while in the water and experiencing a sudden, intense, sharp pain in the right buttock. According to her father, structures resembling "noodles" were observed on the rock.

Following the incident, the patient developed progressive swelling, severe pain, and pruritus at the site, resulting in difficulty walking and sitting. She was evaluated at a local medical centre and prescribed antihistamines and anti-inflammatory drugs. However, as symptoms worsened, the family sought further evaluation at our emergency department. The patient remained afebrile and reported no systemic symptoms.

Physical examination revealed marked edema and erythema of the right buttock, with clear asymmetry compared with the contralateral side. A large arboriform lesion occupying most of the gluteal region was noted, characterized by purpuric streaks on an erythematous base, without tissue loss, and with marked tenderness on palpation. The lesion presented by the patient can be seen in Figure 1. Increased local temperature and significant pain were also present in the perilesional area compared with the contralateral buttock.

Based on the clinical presentation, lesion morphology, and history provided by the parents, an anemone sting was considered the most likely diagnosis. Given the extent and severity of the lesion, blood tests were performed and revealed no abnormalities. Intravenous analgesia was administered.

As early cellulitis secondary to the sting could not be excluded and pain was inadequately controlled with oral medications, the patient was admitted for intravenous therapy. Treatment included intravenous amoxicillin–clavulanic acid (100 mg/kg/day), methylprednisolone (1 mg/kg/day), scheduled analgesia, and antihistamines. Clinical improvement was observed, with gradual resolution of the gluteal lesion. Corticosteroids were discontinued after 72 hours, and the patient was subsequently discharged.

Injuries from marine animal stings are common along the Mediterranean and Atlantic coasts. Anemones inhabit rocky substrates and possess stinging cells, or nematocysts, which induce irritating cutaneous lesions.[1] Clinically, local reactions such as erythema, urticaria, and petechiae are observed, often accompanied by pain, burning, or pruritus. In some cases, lesions may progress, causing more extensive involvement with soft tissue edema. The lesion morphology is a key diagnostic feature, with multiple linear or stellate patterns being most common; central clearing may occasionally be present.[2]

Although the acute reaction typically resolves within a few days, complete healing of the lesions may take several months.

In more severe cases, patients may present with nausea, vomiting, and muscle cramps.[3] Rarely, anemone stings have been associated with acute renal failure and hemolytic uremic syndrome in otherwise healthy young adults.[4,5] Initial management involves immediate cleansing of the affected area with seawater or physiological saline. Freshwater should be avoided, as it may trigger further discharge of nematocysts.[6] Symptomatic relief can be provided with antihistamines and nonsteroidal anti-inflammatory drugs. If cellulitis or significant soft tissue involvement is present, antibiotic therapy may be indicated.[2] In conclusion, anemone stings are generally less severe than those caused by other marine animals; however, they can produce erythematous-purpuric lesions that are intensely painful and pruritic. Although serious complications are rare, awareness of their characteristic morphology is essential for accurate diagnosis.

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FIG. 1. Skin lesion on the buttock, tree-like in shape, linear, purpuric, on an erythematous base. There is evidence of erythema and perilesional oedema.

Informed Consent: Consent to publish the case and associated images in a scientific journal was obtained from the patient's parents.

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