

## Case based learning points

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**Jellyfish Stings Rarely Induced Infectious Cellulitis: First Aid Remedies as Double-Edged Sword**Minoosh Shabani<sup>1</sup>, Ali Saffaei<sup>2</sup>, Mohammadali Asghari<sup>3</sup>, Zahra Sahraei<sup>4,5\*</sup>

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A 27-year-old woman was presented with a burning like lesion. The skin lesion was developed after a jellyfish stings (*Rhizostomae*) while she was swimming in Pattaya Sea in Thailand, five days prior to her presentation. Instantly after jellyfish stings, she was taken into the ship for rescue operations. The ship personnel applied lemon juice and baking soda to the injured area believing that this remedy is efficient in this situation.

The next day, she referred to a local hospital at Pattaya because she was suffering from a horrible pain in her arm and then she was discharged on oral Dicloxacillin and topical Hydrocortisone. The edema was extended the next days which intensified her pain. At this time, she was transferred to Loghman Hakim Hospital, Tehran, Iran. At admission, erythematous edematous patch with centrally grouped vesicles on the left arm was observed (Figure 1). The patient had a high-grade

fever (38.1°C) and was agitated due to her intolerable pain. Other vital signs were normal. In the sonography imaging, soft tissue edema was seen without any collection. According to the clinical and imaging findings, the diagnosis of soft tissue cellulitis due to jellyfish stings was made. The patient admitted to infections ward and intravenous antibiotics including Cefazolin at dose of 2000 mg every eight hours and Vancomycin at dose of 1000 mg every 12 hours initiated. After five days of hospitalization, the patient was recovered from left arm edema. Also, her pain decreased gradually and no obvious erythema was seen. The patient was finally discharged with a satisfactory clinical response.

**LEARNING POINTS**

This interesting case emphasized on two important issues.

**First: First Aid Remedies as Double-Edged Sword**

Jellyfish exist in all oceans particularly in warm tropical marine waters (1). Jellyfish stings causes inflammation, nerve irritation, swelling, pain, and itching for the patient. The most vital step following jellyfish stings is the basic life support whose the main goal is the maintenance of the respiration and blood circulation. Then, if the patient is stable, the tentacle can be removed to avoid any venom discharge. Management of pain and probable systemic reactions should be considered in next steps (2). There are some proved remedies stated in the literature to prevent nematocyst (A specialized cell in the tentacles of a jellyfish) discharge. However, it is important to bear in mind that the safety of these remedies has not yet been verified. Baking soda is one of the remedies which can prevent the rapture of nematocyst. It is also suggested to maintain the pH of utilized slurry less than 8 to avoid skin damage (3). Topical lemon juice is another remedy which has not yet been established as clinically beneficial. In this study, we

applied topical both of these remedies concurrently following jellyfish strings which led to acid-base reaction causing the contact dermatitis. Hence, it is suggested to avoid any unproved remedies as first aid intervention.

**Second; Cellulitis in the Corner of Physicians Mind**

After the marine envenomation, cellulitis can be occurred. For example, there are several reports about cellulitis following stonefish strings. However, the soft tissue cellulitis following jellyfish strings is a rare complication which is not yet well-reported in the literature. (4) Also there are a few reports about cellulitis following jellyfish coral injury, but to the best of our knowledge, this is the first report of skin cellulitis following jellyfish strings (5). Hence, the physicians should be aware of the possibility of cellulitis after jellyfish strings and should use appropriate therapeutic interventions to avoid clinical deterioration and skin necrosis.

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