

Case Letters

## Lionfish envenomation: Relapses controlled by intralesional triamcinolone

Sir,

A 44-year-old woman returned to the United Kingdom from a vacation in Egypt with an erythematous eruption on her limbs. While snorkeling along a coral reef, she had been stung on her forearms, thighs, and legs by several lionfish [Figure 1]. Subsequently, these areas had become red and swollen with an associated burning sensation. She had no past medical history of note and denied any current medications or allergies. On return to the United Kingdom, her initial treatment comprised of oral flucloxacillin and chlorphenamine which did not result in any improvement. Three weeks later, she presented to our dermatology clinic with some urticated, tender nodules and plaques on her limbs [Figure 2].

Haematological and blood chemistry parameters were normal. A skin biopsy showed acanthosis, spongiosis with scattered eosinophils and exocytosis of lymphocytes. In the superficial and deep dermis, there were perivascular and interstitial mixed cell infiltrates composed of lymphocytes, histiocytes, numerous eosinophils and a few larger, more atypical lymphoid cells likely to represent activated T-cells [Figure 3]. These histological features favored the diagnosis of reaction to a sting.

She was treated with oral prednisolone in a dose of 30 mg/day, tapered over 4 weeks along with topical



Figure 1: Lionfish

clobetasol propionate ointment, applied twice daily on the affected areas. This was followed by a steady clinical improvement and moderate resolution of the lesions. Initially, she suffered relapses every 2–3 months and these were controlled by intralesional triamcinolone injections, 10 mg/ml. Slowly, the interval between relapses became longer and she has remained in remission for 3 years to date.

Marine sports such as snorkeling can lead to hazardous encounters with marine life. The lionfish (*Pterois volitans*) is a member of the family *Scorpaenidae*, a venomous fish inhabiting tropical waters. When provoked, the spines of these fish inject venom which may cause pain locally. There may also be bleeding from the mechanical entry of fish spines into the skin and an inflammatory reaction to the pieces of the spine left in the skin. Lionfish spine extract contains acetylcholine and is a toxin affecting neuromuscular transmission.<sup>[1]</sup>

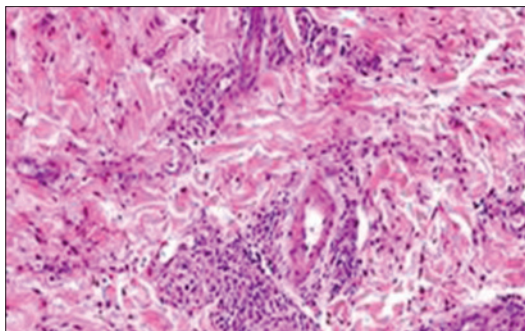
Systemic effects of lionfish envenomation are related to the amount of venom injected. Nausea, sweating, dyspnea, abdominal pain, weakness, hypotension, syncope and chills are the more common systemic symptoms.<sup>[2,3]</sup> In a published series of 101 cases of lionfish stings, 92% of patients experienced local pain, 60% local oedema and 13% systemic symptoms.<sup>[4]</sup>

The immediate step to be taken following a lionfish sting is to inactivate the proteinaceous venom by placing the affected site in hot (up to 45°C) water for 30–90 min or until pain improves.<sup>[1]</sup> This treatment theoretically inactivates or destroys the heat-labile components of the venom *in vivo*. Local anesthetics, antihistamines, oral and topical steroids and oral antibiotics are given as and when required.

*Scorpaenidae* is second only to stingrays in the estimated 40,000–50,000 marine fish envenomations that occur



Figure 2: (a) Urticated plaques on arm following lionfish stings. (b) Urticated plaques on thigh with associated white area following abrasion on coral



**Figure 3: Biopsy of an urticated plaque showing a perivascular infiltrate with many eosinophils in the mid-dermis (H and E, x200)**

worldwide annually.<sup>[5]</sup> We can expect to see increasing numbers of lionfish envenomations on both sides of the Atlantic and with increasing global travel, dermatologists need to be aware of the presentation of this condition. Our case highlights that lionfish stings often follow a relapsing and remitting course and that relapses can be controlled with intralesional triamcinolone.

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#### Conflicts of interest

There are no conflicts of interest.

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