

LETTER TO EDITOR (VIEWERS CHOICE)

MULTIPLE BEE STINGS INDUCED MULTIORGAN DYSFUNCTION IN A 4 YEAR OLD FEMALE

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A 4 year old, female was hospitalized with pneumonia, sepsis, renal and liver failure. Three days prior to hospitalization, she had several bee stings. Multiple erythematous nodules and pustules were noted all over her body (Figure 1). The next day, she had cough, jaundice, hematuria, dyspnea and edema on face, neck, and extremities. On presentation to the hospital, she was tachycardia, tachypnea with normal blood pressure and good perfusion. Oliguria was noted. Laboratory results revealed leukocytosis, thrombocytopenia, metabolic acidosis with renal and liver impairment. Chest x-ray result showed pneumonia. Systemic corticosteroid (methylprednisolone at 1 mg/kg/dose every 8 hours) and diphenhydramine were given. Initially ceftriaxone was started and then shifted to meropenem in view of non-response. She improved after ten days.

Figure 1. Multiple pustular lesion on hand with yellow skin



Venomous bites and stings remains a significant worldwide problem.¹ Rough estimation of immediate systemic reactions to insect stings varies around 1 to 7%.^{2,3} A small percentage of the population may develop systemic or generalized reactions that involve the whole body. Most of these reactions are due to immediate IgE-mediated allergic reactions.⁴ Multi-organ dysfunction after bee stings are extremely rare.⁵ The mechanisms underlying bee sting injury may comprise the direct toxic effect of venom and immune

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inflammatory reaction to venom composition, both of which can lead to organ failure.⁶ The level of cytokine interleukin (IL) -6 in serum is increased, whereas regulatory T lymphocytes decreases significantly in patients in the acute phase, suggesting the induction of an immune-inflammatory reaction.⁶ The wasp/bee venom toxicity is attributed to hemolytic, myotoxic, neurotoxic, vasodilatory, nephrotoxic and hepatotoxic enzymes.⁷ The severity of clinical manifestation is related to the number of stings.⁶

Compliance with Ethical Standards

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