CASE REPORT

A RARE CASE OF SURVIVAL OF HONEY BEE STING VICTIM WITH MORE THAN 1000 STINGS

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ABSTRACT: Bee sting is rarely seen because bee sting occurs when the beehive is distracted. All cases of bee stings are not fatal. Careful removal of stings from the wound without squeezing to prevent venom spread into the wound is essential. Multiple bee stings for a single human being is not always fatal if treated immediately. In our case, there are more than 1000 bee stings to a human being, who survived with immediate treatment.
KEYWORDS: bee sting, anaphylaxis, venom, angioedema, urticaria.

INTRODUCTION: The familiar honey bee species Apis Mellifera and bumble bee (bombus and other genera) attack only when a colony is disturbed. Fewer than 5 people die from identified hymenopteran sting anaphylaxis in England and Wales each year, 2-3 per year in Australia and between 40-50 per year in United States.[1] In bees and wasps, venom is produced in glands at the posterior part of the abdomen and is expelled rapidly by contraction of muscles of the venom sac, which has a capacity of up to 0.1 ml. The venoms of different species of hymenopterans are biochemically and immunologically distinct. Bee and wasp venom contains histamine, acetylcholine and enzymes (phospholipase A and hyaluronidase).[2] The more superficial effects of a sting are due to histamine. Local non- Ig E mediated reactions to insect stings are common and may cause extreme swelling around the site lasting as long as 7 days.

Allergic reactions to insect sting are either generalized (systemic) or large local reactions.

Symptom	Percentage
Cutaneous	14
Urticaria - angioedema	78
Dizziness - hypotension	65
Dyspnea – wheezing	53
Throat tightness - hoarseness	40
Loss of consciousness	35

Symptoms presented by 245 patients with insect stings[3]

Serious reactions include upper airway edema, bronchospasm, hypotension, anaphylaxis and shock and may be rapidly fatal. Severe reactions usually develop within 10 minutes of the sting and only may rarely develop after 5 hours.

CASE REPORT: A male patient aged 46 years came with history of multiple bee stings (>1000) at multiple sites over the body (Fig. 1). He had multiple skin lesions with pain, swelling and

redness at the areas of bee stings (Fig. 2). He had difficulty in breathing and an attack of loose stools. He had facial puffiness, lip swelling, periorbital edema and conjunctival congestion (Fig. 3). He had bee sting in the cornea of left eye. His vision in left eye was reduced at the presentation.

On examination, patient was conscious, coherent, oriented, temperature 98.6^0 F; PR – 96/min, normal rhythm; BP – 110/70 mm of Hg; RR – 18/min; CVS – normal; RS-normal; Abdomen-normal; CNS-no focal neurologic deficit.

Investigations	Result
Hemoglobin	15 gm%
Total leucocyte count	11600cells/mm^3
Differential count	N- 87, L-10, M-2, E-1
Platelet count	1.63 lakhs/mm^3
Random blood sugar	169 mg%
Blood urea	32 mg%
Serum creatinine	1.12 mg%
Urine albumin	Trace
Urine sugar	+
Pus cells	6 – 8
Serum sodium	138m.mol/l
Serum potassium	4.1 m.mol/l
Serum chloride	92 m.mol/l
INVESTIGATIONS	

Patient was treated with Inj.TT ½ cc IM, Inj. Hydrocortisone, Inj. Tramadol, IV fluids, Inj. Pantop, Inj. Cifran, Inj. Metrogyl, Inj. Avil. For visual problems, ophthalmologist removed sting from anterior chamber of left eye, under local anesthesia and treated with Moxifloxacin eye drops, Atropine eye drops, Tab. Diamox 250 mg - t.i.d, Tab. Vit. C - O.D.

With the above treatment, patient was hospitalized for 2 weeks. Patient's skin lesions and vision of left eye had been improved. Though the patient came with more than 1000 honey bee stings, he recovered very well with immediate removal of stings and pharmacotherapy**.**

DISCUSSION: The slightest disturbance near the hive can cause hundreds of bees to become air borne, they may sting any animal or human being within 100 metres of the apiary and may pursue fleeing victims over a kilometer.[4] The most common effect of a sting is a small pruritic and urticarial type lesion that also causes pain. 10% of people have a large local reaction greater than 5cm in diameter. Less than 5% of the patients experience a systemic reaction.[5] In the honey bee, the sting is torn out by the act of stinging out the poison gland which is attached to the sting, continues to inject the venom into the wound.[6] In this patient more than 1000 stings were removed without squeezing to prevent spread of venom into the wound. In some patients symptoms have suggested histamine toxicity: vasodilatation, hypotension, vomiting, diarrhea.

Systemic but not topical antihistamines can be used for minor reaction. Severe envenomation from multiple stings by hymenoptera should be treated with Inj. Adrenaline, Inj. Antihistaminic (Chlorpheneramine Maleate 1.0mg/kg adults; 0.2mg/kg for children) and Corticosteroids.

This patient did not develop anaphylactic reaction as he does not have hypotension, wheezing, laryngeal edema. So Inj. Adrenaline was not given. But as he had multiple stings (>1000) and severe local reactions, he was treated with parenteral Antihistamines (inj. Avil IV 8th hourly) and Corticosteroid (Inj. Hydrocortisone 100mg 8th hourly). The incidence of immediate hypersensitivity to bee stings based on history is 3%.[7] This patient had developed periorbital oedema and swelling of lips (angioedema). A large number of people had suffered a prolonged and unusually severe local inflammatory reaction to insect stings, which are allergic in nature. This patient had severe local reaction only. Deaths from the direct effect of venom had followed 300 – 500 bee stings. This patient was treated as an inpatient for 14 days, the patient recovered well and was discharged. This is one of the rare cases survived with more than 1000 stings with immediate meticulous and careful sting removal and pharmacotherapy.

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Fig. 1: Stings in the wounds

Fig. 2: Local reactions to the stings

Fig. 3: Angioedema

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