Diffuse Hair Loss Following Multiple Honeybee Stings

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Diffuse hair loss as a clinical state may be brought about by a number of different factors acting singly or in combination. We describe a case where multiple honeybee stings were followed by diffuse hair loss after about 4 months.

A 35-year-old unmarried female presented with complaints of diffuse shedding of hair from the scalp, mentioning specifically that the hair would easily come out by the roots during washing and combing. The patient related the hair loss to an event that had occurred about months previously – she and her younger sister were attacked by a swarm of honeybees when they were walking through a wood. The bees which were in ‘thousands’ (in her words) bit them in all exposed parts including the scalp, face, neck, upper trunk, forearms, hands and legs below the knees. Both of them became unconscious immediately thereafter. They were admitted into a hospital with severe anaphylactic shock. While the patient survived after an in-hospital treatment of

days with intravenous fluids, epinephrine and corticosteroids, her sister died immediately after reaching the hospital.

At the time of presentation, there was no obvious baldness in the scalp, there was no scaling in the scalp and the texture of the skin over the scalp was normal. Her eyebrows, eyelashes, axillary and pubic hair were normal. Telogen count, performed on a sample of hair from the vertex and occipital regions, was above 30%. Her nails and teeth were normal. The patient denied any history of hair loss before the episode of the bee stings, and she had never taken anticoagulants or cytostatic agents in the past. There was no evidence of cutaneous vasculitis and her menstrual history was normal. Thyroid hormone levels in her blood were within normal limits. There was no history of any

other stressful events in the 6 months preceding the onset of hair loss. Apart from her hair loss, she was in a good state of health.

The presentation with diffuse shedding of hair in the absence of any obvious baldness, the trichogram showing telogen count of over 30%, and the clear relation of the hair loss to the episode of multiple bee stings, which preceded it by about 4 months, favour the diagnosis of telogen effluvium in this case.

Telogen effluvium has been defined as a non-inflammatory involvement of hair, wherein some form of stress (for example surgery, parturition, haemorrhage, fever, 'crash' dieting, drugs, traction, emotional stress) precipitates the anagen phase into catagen and telogen phases in short order [1]. The venom of the honeybee contains histamine, mast cell degranulating peptide, melittin, phospholipase A₂, hyaluronidase and acid phosphatase [2]. While a stressful event in the form of multiple bee stings leading to severe anaphylactic shock is clearly evident in our case, the possibility of a buildup of significant levels of some chemical (which may be a constituent of the honeybee venom) in the patient's body at the time of multiple bee stings leading to or contributing to the hair loss cannot be entirely excluded.

It must be admitted here that, in our case, circumstantial evidence pointed towards the diagnosis of telogen effluvium, however, it is difficult to prove conclusively that the diffuse hair loss was due to the multiple bee stings, because it is not easy to evaluate other possible factors like endogenous hormonal alterations, accidental exposure to any chemicals, role of nutritional deficiencies and early androgenetic alopecia. It is arguable that the patient suffered telogen effluvium in association with the emotional stress of losing her sister, although the role of the manifest physiological stress is probably of greater significance.

References

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