

Avian Mite Dermatitis: A Diagnostic Challenge

A 20-year-old male came with itching and insect crawling sensations over the trunk and extremities for 1 week. He searched his clothing and bed linen and found two “insects” which he collected on a scotch tape (clear adhesive tape) and brought for the examination [Figure 1]. No other family members were affected. On examination, asymmetrical erythematous papules were observed over the chest, axillae, and extremities [Figure 2]. No burrows were seen in his finger web spaces. Genitals were clear. Light microscopic examination of mite was done from the sample provided by the patient [Figure 3]. The diagnosis of bird mite dermatitis caused by *Dermanyssus gallinae* was made. The patient was prescribed tablet levocetirizine 5 mg at night and instructed to wash his clothes and bed linens in hot water. The patient was also instructed to lookout for a nest of birds in the vicinity of his house. All lesions disappeared in 2 weeks. In the next meeting, the patient narrated that he

found a pigeon’s nest in the vicinity of his bathroom window.

When avian mites infest humans and thrive on human blood, it is called gamasoidosis.^[1] The avian mite has two genera *Dermanyssus* and *Ornithonyssus*. *Dermanyssus gallinae* is a hematophagous ectoparasite primarily of birds in the farm but can also be seen in pigeons, sparrows, starlings, and doves.^[2] Posterior genitoventral shield is broad and rounded, and the dorsal shield is more narrow in *Dermanyssus* as compared to *Ornithonyssus* genus.^[3] Bird mites range from 0.3 to 1mm in length with oval, nonsegmental body, and four pairs of legs.^[3] The mite is generally translucent but can appear reddish when it engorged after sucking blood from the host. *Dermanyssus gallinae* is generally found on the body of a bird as well as in the nest and its surroundings. When bird abandons the nest, the mites catch an alternate host for survival. Avian mites can survive in the surrounding environment up to 5 months.^[1] Humans are an accidental host. Mites can survive on human blood but cannot reproduce.^[3] Patients generally present with few itchy



Figure 1: Mite captured in scotch tape compared with the tip of a pen



Figure 2: Erythematous papules over the right axilla

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Figure 3: Light microscopic appearance of *Dermanyssus gallinae* (40×)

papules, and sometimes vesicles over the body. Burrows are characteristically absent. Patients presenting with only urticarial plaques and diffuse erythema are reported.^[3] Nagaratnam *et al.* reported a case of bird mite infestation masquerading as allergic dermatitis.^[4]

Mites can be removed from the body by a simple scrub bath. Sometimes symptomatic treatment is given with anti histaminic and topical corticosteroids.

To prevent recurrences, the removal of birds' nest is very important. Intensive vacuum cleaning of the surrounding area of a nest can help.^[2] Washing clothes and bed linens in hot water (60°C) kills the mite.^[2] In addition, spraying of insecticides like synthetic pyrethroids may be done in the areas surrounding the nest.

Diagnosis of gamasoidosis can be easily missed as signs of this condition are nonspecific and lack of laboratory investigations. The high degree of clinical suspicion and a thorough history of exposure to bird mite may help in establishing the diagnosis.

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Conflicts of interest

There are no conflicts of interest.

References

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