

The FIRST CASE REPORT of RAT MITE DERMATITIS due to *ORNITHONYSSUS BACOTI* in SOUTHERN I.R. IRAN

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INTRODUCTION and OBJECTIVES

Rat mite dermatitis (RMD) in humans is not a recently identified problem in the world; nevertheless, human involvement to RMD due to the tropical rat mite (*Ornithonyssus bacoti*) is recorded for the first time in southern I.R.Iran. Despite the name of the causal agent, RMD occurs in both tropical and temperate regions. The main objectives of this research are to define clinical and epidemiological features of one typical case of RMD studied in I.R.Iran and add the name of the disease to the list of human dermatological problems in the country.

METHODS

A 26-year old man was referred to our arthropod-borne diseases laboratory for scabies tests complaining of annoying dermatitis, nighttime pruritus, insomnia, and crawling sensation of 3 weeks duration. The patient is an unemployed married man with one daughter living in unsanitary house condition in a suburb of Gaemiyae town, Fars Province. His general health had always been good, with no history of systemic diseases or consumption of any drugs. Having answered more questions, the patient stated that there were tiny motile objects in addition to black rats present in his house. A careful inspection was made of his house to collect the rodents colonized in the wooden ceiling as well as the mites and to identify them.

RESULTS

On physical examination, the patient showed discrete 1-4 mm papules scattered over his back, shoulders, arms, and lateral aspects. No central punctum was noted in any of his lesions. The other symptoms of infestation were nocturnal restlessness and urticaria-like dermatitis. The focus of infestation was black rats (*Rattus rattus*), and the mites had got into the house through crevices in wooden beams. Precise inspection of the house revealed the pale-yellowish mites measuring 0.8–1 mm, actively motile on furniture, bedding, and walls. Several specimens of mite were mounted on slides and identified microscopically as *Ornithonyssus bacoti* (Family: Macronyssidae). Three rats were trapped and identified as *Rattus rattus*, all of them heavily parasitized with *O.bacoti*. This mite was easily established on BALB/c mice under laboratory conditions.

DISCUSSION and CONCLUSION

Dermatitis due to *O.bacoti* is identified with nonspecific symptoms, which makes accurate diagnosis difficult. Differential diagnosis should include scabies, chigger bites, lice, bed bugs, grain, cheese, and fowl mite dermatitis, neurotic and drugs dermatitis. The lesions require no specific treatment because the mite *O. bacoti* spends a relatively short time on a host for blood

feeding only. Nonspecific therapy of the disorder is entirely without effect. The mite identification is extremely important for the therapy strategy. In fact, the elimination of the rodents and the mites would be sufficient. The black rat is epidemiologically recognized as the principal host and the tropical rat mite (*O. bacoti*) as a causal mite. Man becomes an alternative host to RMD in rat-infested habitations. The patient mentioned the mite bite as irritating and painful. Mite bites on humans might be increasingly observed after rodent control in urban communities.