

Trixacarus caviae Infestation in a Guinea Pig

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An eight-month-old guinea pig (*Cavia porcellus*) was presented for examination because of a pruritic skin condition which had commenced approximately one month after the animal had been purchased from a pet store at three months of age. The owners also reported seizure-like "fits" which the animal had just begun to experience. The referring veterinarian had treated the animal with chloramphenicol palmitate, salt water baths, and an antibiotic-antifungal-corticosteroid topical preparation (Panolog, Squibb) without benefit. The owners claimed they were free of any skin lesions themselves.

On examination, the trunk was the most severely affected area with generalized erythroderma, crusting, hair loss, induration, and excoriations. (Figure 1). Primary lesions were few and consisted of occasional papule. Pruritus was intense as manifested by intense scratching, even during the examination. At the conclusion of the examination, the animal experienced one of its "fits" and trembled uncontrollably with apparent lack of consciousness for approximately one minute before returning to normalcy. There was no obvious postictal phase.

Differential diagnoses for the skin condition included ectoparasitism (especially *Trixacarus caviae*) and dermatophytosis. Skin scrapings were performed and revealed numerous sarcoptid mites consistent with *Trixacarus caviae* (Figure 2). Weekly dips with 2.5% lime sulfur were prescribed for six treatments. After the second bath no additional "fits" were reported and the guinea pig was clear of all lesions by the completion of the treatment schedule.

Sarcoptid mite infestation of guinea pigs is most commonly caused by *Trixacarus caviae*, a mite most closely



Figure 1. *Trixacarus caviae* in skin scrapings.

resembling *Sarcoptes* but smaller and with several morphological differences. It is differentiated from *Notoedres cati* by the prominent sharp dorsal spines present in *Trixacarus* and absent from *Notoedres*. It was first described in 1972 as a new species of Sarcoptidae causing mange in guinea pigs in Oxford, England (1). Since that time it has been reported by a number of centres in the United States (2-5).

The principal lesions consist of scaling, crusting, hair loss and intense pruritus. Humans may be transiently affected and display a papulovesicular dermatitis. The mites appear incapable of persisting on human skin and thus treatment is usually limited to the affected animals themselves. Diagnosis should be suspected from the clinical presentation and can usually be confirmed by skin scrapings. The mites are not nearly as difficult to uncover as are those of *Sarcoptes scabiei*. Biopsies usually reveal the mites in their burrows within the area of marked orthokeratotic hyperkeratosis; there is usually a mixed cell

inflammatory infiltrate in the edematous superficial dermis.

Treatment is usually attempted with 2.5% lime sulfur which is safe and effective for all ages of animals. Other treatments reported as successful include crotamiton, 0.25% chlordane, gamma benzene hexachloride, bromocyclen baths, trichlorfon, and 10% tetraethylthiuram monosulfide at seven-to-ten day intervals for three to six weeks (2, 4).

References

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