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Mange produced by *Trixacarus caviae* in 2 guinea pigs from Iași

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Guinea pigs are popular companion animals in Romania, with reported skin diseases. Among them, there is mange, produced by the mite *Trixacarus caviae*, a sarcoptid, burrowing mite that digs tunnels in the epidermis of guinea pigs. Mange represents a very contagious disease between individuals of the same species, leading to clinical signs such as intense pruritus, alopecia, scales and crusts. Stressed and immuno-suppressed animals are more susceptible of showing more severe clinical signs. Our study comes to report a case of mange produced by *Trixacarus caviae*, in two guinea pigs, cohabiting in the same household from Iași. The animals presented typical, scaly and crusted lesions localized on the back, on the neck and around the face region (including periocular and periauricular). The diagnosis was confirmed by microscopic examination of multiple deep skin scrapings taken from the affected areas that showed mites which were morphologically identified as *Trixacarus caviae*. The recommended treatment was subcutaneous injections with 400 µg/kg of Doramectin 1%, 2 injections at a 10 day interval. Hygienic cleaning of their environment (cage, feeding bowls, water system) was also recommended to the owner. The clinical signs showed a significant improvement 21 days after the final treatment, with the pruritus completely resolving and the hair strating to grow in the alopecic zones. The owner was informed that *Trixacarus caviae* is a potential zoonotic mite, that can be occasionally transmitted to humans and can cause transient pruritus and papulo-vesicular lesions in the contact area of the skin with the infected animal. Veterinarian must be aware of the presence of this type of mange in guinea pigs and take into consideration the potential zoonotic risk of this disease.

• Introduction

- Skin diseases in guinea pigs are among the most common reasons for presenting the animal in a veterinary clinic
- Ectoparasites are represented mainly through mites (*Trixacarus caviae, Demodex caviae*), lice (*Gliricola porcelli*), flea (*Ctenocephalides felis*) or ticks (*Ixodes spp.*)
- *Trixacarus caviae*, a member of the *Sarcoptidae* family, produces mange in guinea pigs, one of the most common encountered skin parasitosis in this animal species, an extremely contagious condition between individuals of the same species
- The mite digs tunnels in the epidermis, where the females deposit their eggs, inducing a cell-mediated immune response that causes the intense pruritus
- The number of mites present on an animal is typically low, and can cause severe clinical signs such as intense pruritus, alopecia, scaling and crusting, lesions similar to those of sarcoptic mange in dogs
- Clinical signs are more severe in animals that suffer from stress, overcrowding, poor habitat conditions and in immunosuppressed individuals
- **The aim of our study was to report a case of mange caused by *Trixacarus caviae* mites in two guinea pigs.**

• Material and methods

History

- In June 2025, two guinea pigs, both females, aged 1 and 2 years old, were presented in consultation in the Department of Parasitology of the Faculty of Veterinary Medicine of Iasi, due to itching and hair loss, observed one month prior
- Kept indoor, in a spacious cage occasionally given free access around the house, but only in the interior.
- Received commercial hay and special food for guinea pigs from pet shop, and the bedding used was special for guinea pigs
- No other animals in the household
- The animals have not received any medical treatment in their life

Clinical evaluation

- One of the animals had more extended lesions, located around the face area (especially in the periocular zone, in the temporal area and periauricular), on the neck and in the dorso-caudal area
- The other guinea pig, had lesions only in the dorso-lumbar area

Diagnosis

- Confirmation through multiple skin scrapings, both superficial and deep skin scrapings, to identify both surface mites or burrowers mites

• Results

- The skin samples were put on a slide with mineral oil and examined in the microscope with a x100 magnification. Multiple skin scraping samples were examined and *Trixacarus caviae* mites were morphologically identified.
- Regarding the clinical presentation, one of the animals had more extended lesions, located around the face area (especially in the periocular zone, in the temporal area and periauricular), on the neck and in the dorso-caudal area (Figure 1a and 1b). This animal presented intense pruritus, alopecia, hyperkeratosis of the skin, scales and crusts. Furthermore, the skin presented excoriations caused by intense scratching.

Figure 1. Clinical aspect of lesions in the most affected guinea pig: (**a**) Scaling and crusts in the periocular area, temporal area and around the ear; (**b**) Scaling, crusts and excoriations in the dorso-caudal region

- The other guinea pig, had lesions only in the dorso-lumbar area, showing signs of alopecia and mild scaling, associated with a moderate pruritus (Figure 2).

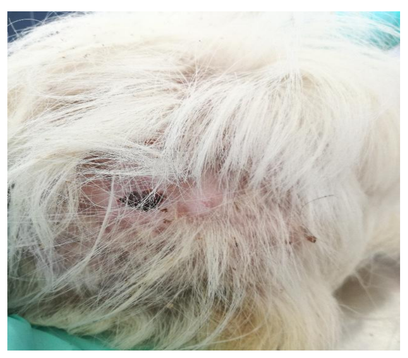

Figure 2. Clinical aspect of lesions in the second animal- alopecia and mild scaling on the dorso-lumbar area

- The choice of treatment was subcutaneous injections with 400 µg/kg of Doramectin 1%, 2 injections at an interval of 10 days.
- Cleaning of the environment (cage, feeding bowls, water system) was recommended
- Furthermore, the owner was informed about the potential zoonotic aspect of this mite, and caution was advised in handling the animals, together with rigorous hygiene of their habitat.
- The follow-up consultation was performed 21 days after the final treatment, the clinical aspect of the animals significantly improved, the skin had no more scales or crusts, the hair started growing and the pruritus was completely absent. All the skin scrapings were negative for mites.

• Conclusions

- Our study contributed to a new report of *Trixacarus caviae* in guinea pigs in Romania, successfully treated with 400 µg/kg of Doramectin 1%, 2 subcutaneous injections at a 10 days interval
- Veterinarian must be aware of the presence of this type of mange in guinea pigs. Furthermore, they need to know about the treatment options that exist, although most of the molecules are used off-label, as they do not have a clear indication for use in guinea pigs. Further studies need to be done in this area and licensed products are needed

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