Annals of the University of Oradea, Fascicle: Ecotoxicology, Animal Husbandry and Food Science and Technology, Vol. XX/B 2021
Analele Universitatii din Oradea, Fascicula: Ecotoxicologie, Zootehnie si Tehnologii de Industrie Alimentara, Vol.XX/B 2021

THE MOST IMPORTANT DISEASES IN GUINEA PIGS AS ZOONOTIC RISK

Purge Ramona*

*University of Oradea, Faculty of Environmental Protection, 26 Gen. Magheru St., 410048 Oradea, Romania, e-mail: rpurge@yahoo.com

Abstract

Guinea pigs are extremely adaptable to a great range of climates, as a species, although as individuals they are highly vulnerable to variations in local temperature and humidity. They are nervous animals and may refuse to drink or eat for a period after any significant change in their location, feed, or husbandry. Environmental changes have a minimal or even nonexistent impact on guinea pigs when two animals are kept together. If a sick guinea pig must be kept in hospital, housing a cage mate with it reduces stress.

Key words: zoonosis, guinea pigs, dermatophytosis

INTRODUCTION

Guinea pigs live in family units where alpha males are predominant. Mature males, and especially strangers, will fight, still, two males who are raised together from a young age or a group of nonbreeding females do not develop such dominance problems. Social problems are diminished after castration and ovariohysterectomy. However, learned behavior in adult males after castration may still make them antisocial.

Guinea pigs require a constant source of water. It must be changed every day because they dirty their water bowls or sipper tubes with food while drinking. They only lick sipper tubes with training, defecate indiscriminately, and are prone to sit in and soil their food bowls and sleeping areas. Guinea pigs are neophobic (afraid of new things), especially when comes to food or water. They are afraid of any changes in appearance, taste, or texture, making guinea pigs refuse food or water.

Guineas pigs develop food preferences early in life, so they may not recognize new food items as food if introduced later. This is the reason why it is important to expose young guinea pigs to a variety of foods, especially a variety of vegetables, early in life.

MATERIAL AND METHOD

The study focused on 20 guinea pigs. It was done at a veterinary office in Oradea for a period of one year. All the pigs came from the pet shops in the city, either bought or received gifts, especially for children. Samples were taken from each animal, from the skin, hairs including. Later the samples were sent to a laboratory in Oradea and then to Bucharest.

RESULTS AND DISSCUSIONS

Of the 20 pigs, 17 were positive for dermatophytes, with obvious clinical symptoms. *Dermatophytosis* is a common disease in guinea pigs and natural infection is always associated with *Trichophyton mentagrophytes* var *mentagrophytes*. Lesions usually begin as broken hairs and circular, scaly alopecia initially occur at the tip of the nose, then spreads to the periocular, forehead, and pinnal areas.

In most severe cases, the dorsal sacrolumbar area is also affected, but the limbs and ventrum are usually spared. Pruritus is either minimal or absent. More inflammatory lesions are observed in some animals, characterized by erythema, follicular papules, pustules, crusts, pruritus, and even scarring. High temperature and humidity may also contribute to a more severe infection.

Other ectoparasitic diseases are not frequent in guinea pigs. Infestation with the fur mite *Chirodiscoides caviae* may result in pruritus and alopecia along the posterior trunk of the body while underlying skin remains relatively unaffected. Subclinical cases observed may be asymptomatic.

Mange, caused by the sarcoptid mite *Trixacarus caviae*, is a common disease in guinea pigs. Its clinical signs are dramatic: intense pruritus, widespread alopecia, and hyperkeratosis. *T caviae* is transmitted through direct animal-to-animal contact from sow to weanlings during feeding and through contact with infested cage material such as bedding.

Based on the results of the post-slaughter control and following the reverse route to the farm of origin, national surveillance may be carried out.

CONCLUSIONS

We may conclude that pet guinea pigs carrying dermatophytes are a zoonotic risk for their owners, children being often the only affected members of a household.

Risk factors for human dermatophytosis are young guinea pigs and the recent acquisition of a new guinea pig. When treating ringworm in

guinea pigs, owners must take into consideration the environmental treatment, with special attention given to the bedding and clothing of all people in contact with infected or carrier animals. Contagious material may persist in the owner's clothing and bedding and is the common reason for a pet's relapse after an initial response.

REFERENCES

1. BENDELLE A.M., HULMAN J.F., HARVEY A.K., HRUBEY P.S., CHANDRASEKHAR S., "Passive role of articular chondrocytes in quinolone-induced arthropathy in guinea pigs", Toxicology. Pathology. 1990;
2. COOPER G., SCHILLER A.L. "Anatomy of the Guinea Pig". Harvard University Press; Cambridge, MA: 1975.
3. FLYNN R.J., "Parasites of Laboratory Animals", Iowa State University Press; Ames, IA: 1973.
4. KING J.A., "Social relations of the domestic guinea pigs after living under semi-natural conditions", *Ecology*. 1956