

*Braz. J. vet. Res. anim. Sci.,  
São Paulo, v. 34, n. 5, p. 276-277, 1997.*

## Florida spots in dogs and cats. A clinical study in São Paulo – Brazil

“Flórida spots” em cães e gatos. Estudo clínico em São Paulo – Brasil

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### SUMMARY

Florida spots were described in Southeastern United States and seems to happen only in tropical or subtropical areas. The disease was described in 10 dogs and 7 cats. In this study, animals presented several white or gray-white round opacities in the corneal stroma. The eyes did not present any inflammatory or discomfort signs. Treatment with corticosteroid or antifungal drugs was not effective. This is the first description of cases of the disease in Brazil.

**UNITERMS:** Corneal diseases; Corneal opacity; Dogs; Cats.

### INTRODUCTION

Since 1979 a corneal opacity which happened primarily in cats was described in South Florida (Tucker *et al.*<sup>4</sup>, 1979). In a preliminary report, based upon the histological appearance of the corneal changes it was considered to be a mycotic keratopathy attributed to a fungal organism (*Rhinosporidium*), and was described in dogs and cats in Southeastern United States (Peiffer Jr.; Jackson<sup>3</sup>, 1979), although no specific agent could be demonstrated. More recently an acid fast organism was associated with these opacities (Fischer; Peiffer Jr.<sup>1</sup>, 1987).

Morphological studies have demonstrated that the disease is indeed a mycobacterial infection, and is possible to reproduce the disease by taking ground-up corneas from infected animals and injecting them into the cornea of other animals (Peiffer, 1994)<sup>\*</sup>. This opacity apparently occurs in tropical and subtropical climates (Whitley *et al.*<sup>5</sup>, 1993), and it is characterized by one or several multi-sized gray or gray-white round opacities in the stromal area of the cornea (Whitley *et al.*<sup>5</sup>, 1993; Zigler<sup>6</sup>, 1994). The central area of the opacity is more dense and the density decreases in the periphery (Tucker *et al.*<sup>4</sup>, 1979). No damage is detected in the epithelium and no discomfort or pain are verified (Nasissé<sup>2</sup>, 1994). Vessels or other inflammatory signs are not present. It is a self-limiting disease, and when opacities are not very dense, vision is not impaired. The disease does not respond to corticosteroid or antifungal drug therapy.

This study presents 17 cases of Florida spots in cats and dogs in São Paulo. These are the first cases reported in our country.

### MATERIAL AND METHOD

Seventeen animals, 10 dogs (Tab. 1) and 7 cats (Tab. 2),

were presented to the Ophthalmology Section of the Veterinary Hospital of the Universidade de São Paulo. Animals were examined by slit-lamp biomicroscopy, tonometry (Schiotz), direct ophthalmoscopy and fluorescein test.

### RESULTS AND DISCUSSION

Among the dogs there was no breed predisposition, since the disease affected three miniature Poodles, one Cocker Spaniel, one Boxer, one Dobermann Pinscher, and four dogs of mixed breed. Ages ranged from 9 months old to 6 years-old, and it seems that the corneal opacities did not appear in very young or very old dogs. Sex distribution rate was six males to four females and the opacities were in a unilateral presentation in six animals and bilateral in four dogs. The evolution of the abnormality ranged from 3 days to one month and regarding bilateral presentation no information was obtained on the first side which was affected. All animals presented various degrees of white or gray opacities, diffuse in the stroma. No epithelium lesion was verified (negative Fluorescein Test), and the eyes showed no inflammatory or irritative signs (Fig.1). In two cases based on the reports by the owners, domiciliary cats had the same symptoms and they may be infected from the same source or by the transmission way reported by Peiffer (1994)<sup>\*</sup>, who infected other animals injecting them with corneal material from affected dogs.

The cats, like the dogs, did not present breed predisposition since four domestic short haired cats, two Siamese cat, and 1 Persian cat presented the corneal alteration. Sex distribution rate was four males to two females. Although we cannot say that there is sex predisposition, cats, like dogs presented a higher incidence in males. In four cats the disease was bilateral and in three cats, unilateral. The disease seems to affect young adult

<sup>\*</sup>Peiffer Jr., R.L. University of North Carolina - USA. Personal Communication, 1994.

**Table 1**

*Clinical observations of dogs presenting Florida spots.*

BREED	SEX	AGE(mo)	EVOLUTION AND CHARACTERISTICS
mixed	M	48	1 month, unilateral
mixed	F	12	10 days, bilateral
mixed	M	60	1 month, unilateral
mixed	F	9	7 weeks, unilateral
Poodle	F	48	5 days, unilateral
Poodle	M	72	?, unilateral
Poodle	M	48	?, bilateral
Boxer	M	24	?, bilateral
Cocker spaniel	F	12	3 days, bilateral
Dobermann	M	36	?, unilateral

**Table 2**

*Clinical observations of cats presenting Florida spots.*

BREED	SEX	AGE(mo)	EVOLUTION AND CHARACTERISTICS
DSH	M	48	3 years, unilateral
DSH	F	12	3 months, bilateral
DSH	F	24	?, unilateral
DSH	F	36	3 months, bilateral
Siames	M	12	1 month, unilateral
Siamese	F	48	6 months, bilateral
Persian	F	12	3 months, bilateral

DSH = domestic short haired

animals once the age range was one to four years old with an evolution varying from one month to 3 years. Three cats shared housing with other cats showing evidence of

disease. Like dogs, lesions were round, dispersed in the stroma. No other sign was observed (Fig.2). Corticosteroid or antifungal drug therapy was ineffective in all the cases.



**Figure 1**

Mixed breed dog presenting gray-white corneal opacities diffuse in the stroma.



**Figure 2**

A domestic short haired cat presenting gray opacities denser in the center of the lesion in corneal stroma level.

## RESUMO

“Flórida spots” é uma afecção da córnea caracterizada por opacidades brancas ou branco-acinzentadas do estroma. Descrita no sudeste dos Estados Unidos, parece atingir somente animais de regiões tropicais ou subtropicais. Os olhos não apresentam sinais de inflamação ou desconforto e não respondem ao tratamento com corticosteroide. De etiologia ainda obscura, parece estar relacionada a uma micobactéria. Descreve-se pela primeira vez, em nosso país, esta afecção em 10 cães e 7 gatos.

UNITERMOS: Doenças da córnea; Opacidade da córnea; Cães; Gatos.

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Received: 14/7/95

Accepted: 3/12/96