Bone histoplasmosis in a cat from a hyperendemic area of sporotrichosis

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Objective

The aim of this report was to describe a case of disseminated histoplasmosis with osseous lesion in a cat from Rio de Janeiro, Brazil.

Methods

A 3-years-old female domestic cat, castrated, weighing 3.7 kg, with a right thoracic limb lameness for five months, was taken to a private practice orthopedic veterinarian. Radiological examination showed satisfactory alignment between radial epiphysis and carpal-radial bone, with intra-articular space showing density and volume increased. Carpal radiodensity slightly altered, with appearance of initial osteopenia. Presence of cystic structure in the distal ulnar epiphysis, with regular limits and radiolucent interior that corroborate the usual image of bone cyst. Bone biopsies of the distal ulnar lesion were then obtained for histopathology and fungal culture. Histopathological examination showed well-differentiated bone scurfs, surrounded by marked neutrophil-macrophage inflammatory infiltration, in some sites interspersed with some lymphocytes and plasmocytes, compatible with piogranulomatous process (osteitis). PAS staining was negative. Culture revealed *Histoplasma capsulatum*. The cat had exposure to outdoor environments. However, it was not possible to determine how the infection occurred, but it is acceptable that this cat was in contact with sources of exposure to *H. capsulatum* spores. Because of this diagnosis, the veterinarian referred the cat to the Oswaldo Cruz Foundation (Fiocruz), Rio de Janeiro, Brazil, which is a reference center of diagnosis and treatment of fungal diseases in animals.

Results

In the clinical examination, the animal showed good body score and only a volume increase in the carpal joint. According to the owner, the cat had difficulty to perform simple moves like running, jumping and scratching. Oral itraconazole (100 mg) was prescribed once daily. The drug was well tolerated and there were no clinical adverse effects during the treatment. The remission of the initial clinical signs was observed at seven months of therapy. Physical examination have demonstrated that the function and structure of the bone tissues were completely recovered. The lameness disappeared and the cat was able to perform common movements. The radiological examination revealed intra-articular space of epiphysis radial and carpal-radial bone maintaining its usual density. Peripheral soft tissues at usual density and volume. Distal epiphysis of the ulna with a regular and well defined cyst image, without revealing important bone remodeling or even fracture lines.

Conclusion

Little information is available on feline histoplasmosis in Brazil and to the authors' knowledge, there are only six reported cases in Brazil. However, feline sporotrichosis is highly endemic in Brazil, especially in Rio de Janeiro. At Fiocruz (1998 – 2016), 4.798 cats were diagnosed with sporotrichosis and two with histoplasmosis. Considering the importance of histoplasmosis for veterinary mycology, as well as, the scarcity of case reports in cats in Brazil, veterinary practitioners should be aware of the importance to differentiate feline sporotrichosis and histoplasmosis based on clinical and laboratory features. The main concern regarding the differential diagnosis of these mycoses lays on the fact that each of them will lead to different epidemiological actions. In this context, we emphasize the high zoonotic potential of feline sporotrichosis.

Figure 1. (A) Radiological examination before the treatment; (B) Radiological examination after the treatment with oral itraconazole (100 mg) for seven months.