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Cyniclomyces Related to Comportamental Disturb in Dog: Case Report

Elizabeth Simões do Amaral Alves[1], José Sérgio da Silva[1], Walter Franklin Bernadino Leão Filho[2], Kelmanny Crislen Ferreira Sousa[2], Fabrícia Duarte Omena[3] and João Manoel da Silva[4]

[1]Department of Animal Morphology and Physiology, Veterinarian, Federal Rural University of Pernambuco – UFRPE, Brazil
[2]Veterinarian, Universidade Federal de Alagoas - UFAL, Brazil
[3]Veterinarian, Centro de Estudos Superiores de Maceió – CESMAC, Brazil
[4]Department of Biotechnology, Agronomist Engineer, Centro de Ciências Agrárias – CECA, Brazil
**Corresponding author*

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A B S T R A C T

Cyniclomyces guttulatus is a commensal ascomycete fungus identified in the natural microbiota of rabbits and other herbivores, as well as being present in cases of diarrhea in rabbits. In the literature, this agent is described in dogs as responsible for suppurative cholecystitis and/or cholangiohepatitis, chronic gastritis, and its presence is currently occurring in the feces of animals with diarrhea or even in healthy animals, but its clinical importance has not yet been fully elucidated. This study aimed to report the case of a healthy dog of the Shih Tzu breed, 2 months old, not neutered, weighing 2 kg, affected by ascomycete of the genus Cyniclomyces related to the direct cause of the practice of coprophagy.

Introduction

Cyniclomyces guttulatus is a commensal ascomycete fungus identified in the natural microbiota of the mucosal layer of the gastric fundus and pylorus of rabbits and other herbivores, causing diarrhea where they are released into the environment, remaining viable for a long period in the form of ascopores (Ferraz *et al.,* 2019). In the medical routine of small animals, diarrhea is one of the most frequent clinical signs of disorders of the gastrointestinal tract, with varied etiologies: bacterial, viral, parasitic, toxin-infections and fungal, which can be diagnosed through coproparasitological, where it is possible to identify agents possibly pathogens, such as *Cyniclomyces guttulatus* (Ferraz *et al.*, 2020).

Thus, the isolation of *Cyniclomyces* as a cause of diarrheal conditions and its clinical importance has not yet been fully elucidated,

but it is believed to be related to gastrointestinal disorders, as a primary or opportunistic agent (Alves *et al.,* 2018).

The presence of *Cyniclomyces* has been found, in the stomach associated with suppurative cholecystitis and/or cholangiohepatitis, in dogs with chronic gastritis through gastric lavage, but mainly its presence has been occurring in the feces of animals with diarrhea or in healthy animals (Furtado *et al.,* 2013). Thus, this study aimed to report the case of a healthy dog affected by ascomycete of the genus Cyniclomyces, related to the behavioral disorder of coprophagy.

Case Report

On 07/27/2020, a 2-month-old male Shih Tzu breed dog was treated, weighing 2 kg, dewormed, first administered polyvalent vaccine, complaining of coprophagy in a Veterinary Hospital in the city of Arapiraca-Alagoas, Brazil.

During the physical examination, the patient had normal physiological parameters, in the anamnesis, normal water and urine intake was reported, present appetite, exclusive feeding of super premium food in the amount recommended by the manufacturer, whose tutor emphasized smelly evacuation and ingestion of feces.

Hemogram was requested that showed mild thrombocytosis and stool coproparasitological that identified the presence of three crosses (+++) compatible with ascomycete of the genus Cyniclomyces, where oral antifungal therapy of fluconazole was instituted at a dose of 5mg/kg, SID (1x per day) for 30 days. After the treatment was completed, the patient returned to the veterinary hospital to repeat the tests, where the blood count showed no change and the fecal coproparasitology was negative.

Results and Discussion

Among the main causes of coprophagy, we can mention: poor quality food, insufficient quantity, unbalanced diet, gastrointestinal parasites, exocrine pancreatitis, vitamin B1 (thiamine) deficiency, behavioral causes such as, for example: separation anxiety, bored dogs that handle feces as a hobby, punishment of the person responsible for finding feces in inappropriate places, and the animal ingesting them in order to hide them, are examples of the reasons that justify this behavioral disorder (Melo and Scheraiber, 2015).

Cyniclomyces was related to the direct cause of coprophagy, in this report, where we can raise two factors: the bad smell as an attraction caused by the large presence identified in the feces coproparasitology; as well as due to the fact that the population imbalance of the intestinal microbiota compromises the physiological fermentation process and nutrient absorption, resulting in the need for ingestion of feces for compensation.

In Brazil, the genus *Cyniclomyces* is rarely reported, but it is believed that there is underreporting of diagnoses. The literature describes the involvement of pathologies in the gastric, hepatobiliary and enteritis systems, but its pathogenesis as a primary or opportunistic agent in the dynamics of the lesions that this ascomycete causes in the tissues has not yet been defined.

The response of the study patient to treatment with 5mg/kg of oral fluconazole SID for 30 days was satisfactory, where the instituted therapy eliminated the agent, the odor of feces as well as its ingestion, which, in addition to providing reinfection of intestinal parasites, was a reason too much of an inconvenience for the tutor. In that report, there is a new hypothesis of cause for coprophagy in the clinic of small animals, highlighting the

importance of the fecal stool examination, which was essential to identify the genus *Cyniclomyces* in a clinically healthy patient, and the efficacy of fluconazole as a therapeutic single, more studies should be carried out on the relationship of this agent and its pathogenicity.

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