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Original Article

Isolation of Malassezia Infection from a Otitis Case of Dog

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Abstract

Thepresent case study reports otitis infection in a 2 year old cross bred dog. The affected dog showed symptoms of serous discharges from the ear with foul odour, slight elevation in temperature and shaking its head at regular intervals. Isolation studies on Sabrouds dextrose agar revealed finger foot print yeast cells characteristic of *Malassezia* organisms and a few bunches of grapes characteristic of Staphylococcus bacteria. On ABST examination ,the culture was highly sensitive for chloramphenicol and Sulpha trimethoprim.

Keywords: Dog; Foot Print Appearance; *Malassezia.*

Introduction

Malassezia infection is quite common in dogs affecting the ears and cause severe otitis. Otitis is the inflammation of the ear. *Malassezia* sps are the common commensals acting as lipophilic yeasts and are also found in the cutaneous micro flora of dogs. The presence of *Malassezia* infection in dogs is due to allergies, endocrinopathies, immunosuppressive and other skin diseases. The mostcommoncausative organism for fungal otitis in dogs is*Malassezia pachydermatis* [8] other reasons for active *Malassezia* organism's proliferation can be due to climatic variation and secondaryinfections [7]. Lipases and proteases produced by the organism causes cutaneous inflammation pH [4]. The present study reportsotitis due to *Malassezia* and its antibiogram in a case study.

Materials and Methods

A dog was presented to the Teaching Veterinary Clinical Complex with a history of discharges from the ear having foul odour and slight swelling at the base of the ear. There was alopecia and thickening of the skin. On examination of the ear the serous discharges were collected in a sterile swab material were collected from lesions [5]. Sterile swabs were collected fromears inoculated into nutrient broth and incubated at 37°C for 48 hours. After attaining growth in nutrient broth,culturewas streaked on to Sabouraud's dextrose agar and nutrient agar for cultural isolation and their antifungal and antibacterial sensitivity test. The sensitivity was performed by disc diffusion method using Ketoconazole, Clotrimazole, AmphotericinB, Itraconazole, chloramphenicol, sulpha-trimethoprim and Kanamycin discs [2,3].

Results and Discussion

Development of convex,white colour,smooth and dry colonies on SDA and very few white pin point colonies on nutrient agar were observed. The isolated colonies on Sabouraud's dextrose agar and nutrient agar were subjected for methylene blueand Gram's staining respectively according to the standard

protocol. The colonies on SDA on staining with methylene blue revealed abundant budding yeast cells with a characteristic foot print shape (Fig. 1). While the colonies on nutrient agar revealed bunches of grapes specific for Staphylococcus organisms. *Malassezia* along with the co-infection of staphylococcus organisms were responsible for the otitis infection. On performing antibiogram the culture was sensitive to ketoconazole, chloramphenicol and sulpha trimethoprim.

Warm and humid climatic conditions favours the

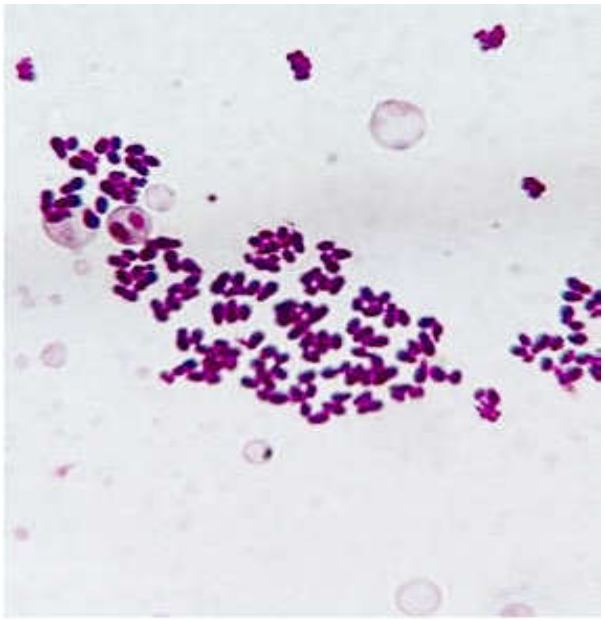

Fig. 1: Budding yeast cells of Malassezia having characteristic appearance of Foot print appearance.

growth of yeast and the presence of cerumen in the ear canal also acts a predisposing factor for otitis infection by *Malassezia* organisms [4,6]. Normally, *Malassezia* organisms can be seen in a small number on healthy dog skin and otic discharge but can be proliferated or overgrowth can occur due to adverse food habbits, immune mediated reactions, atopy etc. [1].

In otitis cases of *Malassezia* , mixed infections are commonly seen which among them are the Gram positive bacteria especially *Staphylococcus* and *Streptococcus*. Occasionally, Gram negative organisms like *Pseudomonassps* can also complicate the infection causing severe form of otitis externa. [8]. In the present study the bacterial infection was with Staphylococcus and chloramphenicol and sulpha trimethoprim were proved to be sensitive in the antibiogram test.

Conclusion

In the present study the cause for the serous discharges and inflammation of the ear was due to *Malassezia* and co-infection with *staphylococcus* organisms . the drugs that are sensitive for this mixed infections were Ketoconazole, Chloramphenicol and Sulpha trimethoprim.

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