

Systemic Candidiasis and its Clinical Management in Pigeon



Veterinary Science

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ABSTRACT

The present paper deals with isolation and clinical management of systemic candidiasis in pigeon which was showing symptoms like regurgitation, anorexia and the birds were whitish plaques in the mouth. Identification of the yeast was done based on the colony morphology, Gram staining, presence of pseudohyphae, chlamydospores and production of germ tubes. After confirmation the yeast was subjected to antifungal sensitivity test and treated with fluconazole tab.

Introduction

Candidiasis is caused by *Candida* spp., chiefly *Candida albicans*. Pigeons have the potential for transmission of several diseases to humans and domestic animals. Nearly one-fourth of all mycotic deaths in humans are caused by this yeast (Weber, 1979). Incidence of candidiasis (yeast infection) in women is an increasing problem. The discomfort caused by this disease significant enough to warrant the elimination of pigeons which are one frequently infected with *Candida*.

Case history and observations

Two pigeons showing symptoms like regurgitation, anorexia were brought to clinical complex, CV& AS, Pookode. On clinical examination, whitish plaques were observed in mouth. There was history of death of two pigeons in the same flock after showing same symptoms. Throat swab was collected and sent to Department of Veterinary Microbiology.

Treatment and discussion

C. albicans has the potential to induce disease involving most tissues and organs (Shepherd *et al.* 1985). Immune suppression or disturbances to the normal bacterial flora of the host may predispose to acute or chronic fungal disease in colonised birds (Dahlhausen 2006). Colonisation itself may predispose to disease, and the colonised host may become a carrier or latent source of infection (Cafarchia *et al.* 2006). *C. albicans* may be regarded as an emerging pathogen (Daszak *et al.* 2000), i.e. a pathogen showing an increase in either incidence or geographic distribution. The diagnosis of candidiasis is most often made from the clinical signs, visualization of lesions, and either cytology or culture of the organism. Identification of budding yeast on a Gram stain collected from the surface of a suspected lesion is helpful in confirming a diagnosis. However, the presence of pseudohyphae is considered

to be more diagnostic of a primary infection.

Treatment of candidiasis include the administration of antifungal medications as well as eliminating any risk factors, such as poor diet, poor sanitation, or the presence of other diseases. Antifungal medications commonly include nystatin, flucytosine, ketoconazole, fluconazole, and itraconazole. For treatment of oral or skin infections, ointment containing amphotericin B may be applied. Low-grade infections of the crop or upper gastrointestinal tract with minimal lesions may respond. More established, invasive infections require the use of antifungals such as Nystatin, azoles such as fluconazole or itraconazole, or amphotericin B (Velasco, 2000).

In the present case, the throat swab streaked on Sabouraud dextrose agar resulted in the formation of white to creamy, shiny, convex colonies after 3days incubation at 37°C. On Gram staining, Gram positive thin walled budding yeast cells were observed. Subsurface inoculation of the culture in corn meal tween 80 agar revealed the presence of pseudohyphae and chlamydospores. Productions of germ tubes were observed after inoculation of the isolated colony in bovine serum within 2 hours at 37°C. The yeast was found to be sensitive to Fluconazole, Itraconazole, Ketoconazole and resistant to Nystatin and Amphotericin B.

The owner was advised to give fluconazole tablets (Maczol,150mg) and Vimeral (antistress vitamin supplement) for 15 days in drinking water. The owner was also advised to isolate the sick birds from the remaining flock and avoid stress. Symptoms were started subsiding after one week and complete clinical recovery was reported after treatment period

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