

Improved Aviculture Management May Prevent Candidiasis in Birds ¹

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Candida albicans, the causative fungus of candidiasis, is normally present in small numbers in the upper digestive tract of birds, and is considered harmless. During periods of stress, however, the fungus can grow rapidly causing a sometimes deadly disease. Besides candidiasis, this disease is also referred to as crop mycosis, moniliasis, thrush, and oidiomycosis.

Affected birds lose weight, regurgitate frequently, and act listless. Other signs include reduced growth rate in young birds, diarrhea, and delayed emptying and enlargement of the crop. Cheesy white mouth lesions are another common sign. These lesions resemble those of vitamin A deficiency and proliferative lesions observed in the wet form of avian pox. Severe oral lesions may become obstructive and interfere with normal respiration and feeding, resulting in debilitation and unthriftiness. The prognosis in these cases is poor.

Aside from mechanical impairment of food passage, involvement of the crop results in a specific condition termed sour crop. A grayish white layer or pseudomembrane will commonly cover the crop lining, which may be ulcerated and inflamed. The crop wall will be thickened and opaque and birds will regurgitate food because of a loss of crop wall tone. Regurgitated food may be seen on the face or feathers of the head and neck.

Candidiasis results when the candida fungus grows uncontrollably. Factors that have been implicated as playing a

role in predisposing birds to the disease include parasitism, malnutrition, vitamin A deficiency, infectious diseases, and consumption of moldy feed. The disease appears particularly to be associated with prolonged antibiotic therapy and poor sanitation. The microflora of a bird's digestive tract is altered by these factors. The normal intestinal bacteria that keep the yeast population suppressed are gone, allowing rapid fungal growth and invasion of the mucosal lining by the organism.

Diagnosis is based on a history of predisposing factors, clinical signs, gross lesions and cultivation of *C. albicans* on laboratory media. Because the fungus can be isolated from healthy birds, an original heavy growth is essential for diagnosis.

Drugs that have been effective in treating candidiasis include Mycostatin (nystatin), Ancoban (flucytosine), and Nizoral (ketoconazole). Nolvasan (chlorhexidine) is sometimes added to the birds' drinking water for treatment (1 ml/pint of H₂O).

Mycosis of the digestive tract is often related to unhygienic and overcrowded conditions. Efforts should be made to provide a clean, sanitized environment for the birds. Parasites and infectious diseases should be controlled, and a complete nutritional diet provided. Whenever new birds are acquired, they should be isolated from other birds for enough time to be reasonably certain the new stock is healthy. If prolonged antibiotic therapy is anticipated, such

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as for prevention of Psittacosis (Parrot Fever), preventive treatment with an antimycotic drug should also be considered. *Lactobacillus acidophilus* (Lactinex) may be added to the diet when long-term antibiotic therapy is used.