

Three cases of feline ocular coccidioidomycosis: presentation, clinical features, diagnosis, and treatment

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Abstract

Objective To describe clinical and diagnostic features of ocular coccidioidomycosis in cats and the response to fluconazole and anti-inflammatory therapy.

Animals studied Three cats with naturally acquired coccidioidomycosis.

Procedure Cats were treated with topical or systemic corticosteroids and systemic fluconazole, an antifungal of unproven efficacy against feline ocular coccidioidomycosis.

Results Two cats presented for periocular swellings, either subpalpebral or periorbital, with systemic signs including weight loss, unkempt hair coat, and lethargy. One cat presented for apparent blindness with no systemic signs. Clinical ophthalmologic abnormalities were bilateral in each cat and included hyperemic, conjunctival masses, fluid-filled periorbital swellings, granulomatous chorioretinitis, nonrhegmatogenous retinal detachments, and anterior uveitis. Cats were diagnosed with coccidioidomycosis using a combination of clinical findings, serology and, in two cases, visualization of *Coccidioides* spherules by either aspiration cytology or biopsy. Active anterior uveitis and periocular swelling were resolved in all cats during treatment. Chorioretinal granulomas, although persistent, significantly decreased in size.

Conclusions Coccidioidomycosis should be considered as a differential diagnosis for cats with a travel history to the southwestern United States that demonstrate periocular swelling, anterior uveitis, or granulomatous chorioretinitis, with or without evidence of systemic disease. Aspiration cytology or biopsy of suspicious conjunctival or skin lesions, if present, may aid in diagnosis. A combination of corticosteroids and fluconazole may be effective in treating ocular coccidioidomycosis, although chorioretinal granulomas may persist and long-term fluconazole therapy may be necessary.

Key Words: anterior uveitis, cat, chorioretinitis, coccidioidomycosis, periocular swelling, valley fever

INTRODUCTION

Coccidioides immitis and *Coccidioides posadasii* are saprotrophic, dimorphic fungi that commonly cause coccidioidomycosis in domestic animals as well as humans. The organism is endemic to areas of southwestern United States, including Arizona, New Mexico, and southern California and Texas.^{1,2} Natural infection with *Coccidioides* spp. most often occurs through inhalation of arthrospores, which are released upon proliferation of the mycelial form of the organism. Rainfall facilitates this process and infection often occurs during dry weather following heavy rainfall.³ Upon inhalation, the endospores are phagocytosed within alveoli

and transform into spherules. The spherules subsequently endosporulate and release additional endospores into the local tissue. This cycle may continue until disease occurs.^{3,4}

There is limited information available on feline coccidioidomycosis, but systemic distribution is thought to be common and, consequently, cats may present for a wide range of signs. The most common clinical abnormalities are non-healing skin lesions (e.g. draining tracts, ulcerations) followed by respiratory and musculoskeletal diseases. Neurologic (e.g. seizure activity, ataxia, and behavior changes) and ophthalmologic signs have also been reported. Non-specific signs including weight loss, pyrexia, and anorexia are common.⁵