Blastomycosis results from infection with the thermally dimorphic fungus *Blastomyces dermatitidis*. In this case study, a 4-year-old, spayed Labrador retriever presented with a 1-week history of draining nodular to ulcerative lesions, coughing, lethargy, inappetence, and impaired vision. Disseminated blastomycosis was diagnosed based on cytologic examination of exudate, lymph node fine-needle aspirate, and skin biopsy. Concurrent oral azole therapy with itraconazole at 200 mg q24h and fluconazole at 17 mg/kg/day divided q12h were administered. Ocular lesions were treated topically along with oral prednisolone. While hospitalized, the dog deteriorated; further diagnostic testing uncovered cardiac nodules and glaucoma. The dog was treated aggressively and discharged 10 days after admission on oral itraconazole, fluconazole, sotalol, enalapril, pimobendan, antibiotics, prednisolone, and topical opthalmic medications. In addition to the dog’s clinical response, urine antigen levels for blastomycosis were used to monitor therapeutic response to therapy. At admission, it was 17.14 U (high); at 11 weeks, when itraconazole therapy was discontinued, it was 2.55 U; 8 weeks later after sole fluconazole therapy (week 19), antigen levels were 0.52 U; and at the end of therapy (7 months postpresentation) levels were undetectable. The dog required enucleation of one eye but regained partial vision in the other.

**Commentary**

Combination azole therapy for treatment of blastomycosis is unusual and warrants further study. Tissue penetration is an important consideration when selecting an azole; this is highlighted by fluconazole's improved ocular and CNS penetration. Concurrent antiinflammatory doses of prednisolone are commonly prescribed during the initial weeks of therapy, but possible immunosuppression makes their use debatable. Azole therapy typically requires months, and when to discontinue is a challenging decision. The urine antigen level at which therapy can be safely discontinued has not been defined. Thus, serial monitoring of affected body systems is recommended in addition to the urine antigen test, the results of which consistently decrease with therapy.—Jonathan Bach, DVM, DACVIM, DACVECC

**Source**