



CASE REPORT

Possibility of Fluconazole Resistance During Treatment for Histoplasmosis

OVERVIEW:

Fluconazole is frequently used to treat cats with histoplasmosis, as it is well tolerated, cost effective, and available in convenient dosage form. In one study of 30 cats with histoplasmosis, treatment with fluconazole (19.3 mg/kg/day) led to similar survival and recrudescence rates as itraconazole (10.0 mg/kg/day), suggesting that fluconazole is an effective therapy for feline histoplasmosis.¹ While this may be true in many cases, treatment failures and resistance developing over time have occasionally been identified anecdotally. Fluconazole is no longer recommended for treatment of human histoplasmosis, as resistance was described during the 1990s.^{2,3}

Case Report Published in JFMS Open Reports:

MiraVista partnered with veterinary internist Dr. Andrew Hanzlicek at Oklahoma State University and feline practitioner Dr. Gary Norsworthy from Alamo Feline Hospital in San Antonio, TX to publish a case report of fluconazole resistance in a cat being treated for histoplasmosis.⁴ Although it did not appear in the final article, a second feline case with suspected fluconazole resistance was seen by Dr. Norsworthy. The first cat had fungal culture performed to allow for antifungal susceptibility testing and documentation of high MIC for fluconazole. Since most veterinary practitioners will not be performing culture for *Histoplasma*, Dr. Norsworthy's case was typical of what one might observe. The cat showed an initial response to fluconazole treatment with persistent low positive antigenuria. After >1 year on fluconazole, the urine antigen increased dramatically to high positive. Following a change to itraconazole, the urine antigen cleared successfully.

CONCLUSION:

Veterinary practitioners should be aware of the possibility of fluconazole resistance developing over time, particularly in cats or dogs treated for longer than a year. If the urine *Histoplasma* antigen is not clearing while receiving fluconazole, a switch to itraconazole may be indicated.

REFERENCES

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2. Wheat LJ, Connolly P, Smedema M, et al. **Emergence of resistance to fluconazole as a cause of failure during treatment of histoplasmosis in patients with acquired immunodeficiency disease syndrome.** Clin Infect Dis 2001; 33:1910–1913.
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