Terbinafine Pulse Therapy for Dermatophytosis

Dermatophytosis, the most common contagious and infectious skin disease of cats, is commonly treated with a systemic antifungal drug. Terbinafine is an allylamine antifungal agent that inhibits ergosterol synthesis, resulting in fungal cell wall damage and lysis. Pharmacokinetics of 1 PO (30 mg/kg) and IV (10 mg/kg) dose of terbinafine were measured in 6 cats with a 2-week washout period between studies. As injectable terbinafine is currently unavailable, the test was compounded into a 50 mg/mL concentration. Five of 8 cats experienced marked lassitude after injection but recovered within 15 minutes. No adverse events were reported with the oral dose. The IV dose’s half-life was 10.4 ± 4.56 hours and the oral dose’s was 8.01 ± 3.46 hours. The calculated bioavailability after oral dose was 31% ± 10.85%.

 Commentary
The generic availability of terbinafine has resulted in increased interest for its role in treating feline dermatophytosis. The drug absorption and eventual deposition in the hair follicles (where the infection is located) is important. Initial studies on terbinafine use in cats reported that 30–40 mg/kg were needed for cure; this dose range is currently recommended. In a recent study, 14 days of terbinafine at 34–46 mg/kg q24h PO showed a mean concentration of terbinafine of 2.30 ng/mg in hair and a half-life of 1.84 weeks. Of interest was the prolonged persistence of the drug above MIC (~5.3 weeks). This study suggested that terbinafine may be useful for pulse therapy, similar to the week on/week off protocol used with itraconazole. In my practice, terbinafine has been used in cats on a week on/week off basis, proving to be an effective oral antifungal along with concurrent topical antifungal rinses (to eliminate the spores on the hair that survived systemic therapy). Confinement and cleaning were part of the treatment program.—Karen Moriello, DVM DACVD

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