Equine endometrial concentrations of fluconazole following oral administration
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The objective of this study was to determine the plasma and endometrial concentrations of fluconazole after oral administration to mares. Our hypothesis was that endometrial levels of fluconazole would be maintained above the minimum inhibitory concentration (MIC) of *Candida albicans*.

Group one mares (n=6) in early estrus were administered a single loading dose of 14 mg/kg fluconazole (Glenmark Generics Inc., Mahwah, NJ) via naso-gastric tube. Group two mares (n=3) were administered the loading dose, followed by maintenance doses of 5 mg/kg q 24 hr for six days. Plasma and endometrial biopsy samples were collected at predetermined times and analyzed at the Pharmacology Core Laboratory, Colorado State University using HPLC-MS.

Mean plasma and endometrial fluconazole levels at 24 hrs following loading dose were 8.7 ± 0.2 µg/ml (mean ± SEM) and 12.7 ± 0.3 µg/mg respectively. Fluconazole levels in plasma and endometrium 24 hours following the last maintenance dose were 7.8 µg/ml ± 1.0 and 7.2 ± 2.2 µg/mg, respectively. The published MIC of *Candida albicans* is 0.5 to 8.0 µg/ml. Two of three mares in our maintenance dose maintained uterine levels greater than the MIC (8.0 µg/ml) for *Candida* spp.

In summary, oral administration of fluconazole (5 mg/kg q 24 hrs) will achieve endometrial concentrations near or above the MIC for *C. albicans*.

**Keywords:** Fluconazole, fungal endometritis, *Candida*, pharmacokinetics