Retrospective Study on Equine Uterine Fungal Isolates and Antifungal Susceptibility Patterns (1999 to 2011)

Katherine A. Beltaire, DVM, Diplomate ACT; Soon Hon Cheong, DVM, Diplomate ACT; and Marco A. Coutinho da Silva, DVM, PhD, Diplomate ACT*

Polyenes have been shown to be the most effective antimycotic drug in vitro and may be the empiric treatment of choice for fungal endometritis. Authors’ addresses: College of Veterinary Medicine, Cornell University, Ithaca, NY 14853 (Beltaire, Cheong); and Department of Veterinary Clinical Sciences, College of Veterinary Medicine, The Ohio State University, 601 Vernon L. Tharp Street, Columbus, OH 43210 (Coutinho da Silva); e-mail: marco.dasilva@cvm.osu.edu. *Corresponding and presenting author. © 2012 AAEP.

1. Introduction
Knowledge of commonly encountered fungi infecting the mare reproductive tract and their respective drug susceptibilities should improve treatment efficacy in mares with fungal endometritis.

2. Objective
To report the spectrum of fungal isolates from uterine samples from mares with reproductive problems and their respective antifungal susceptibilities.

3. Materials and Methods
Equine uterine samples submitted to Cornell University for fungal culture between 1999 and 2011 were reviewed. Mare reproductive histories, fungal culture results, antifungal susceptibilities, and concurrent aerobic culture results were evaluated. Patterns of antifungal susceptibility and resistance were assessed over time.

4. Results
One hundred two fungal isolates were cultured from 92 uterine samples from mares with reproductive problems. Yeast (69%) and mold with septated hyphae (MSH; 26%) were the most common isolates. Ninety-five percent to 100% of all fungal isolates were susceptible to the polyenes, whereas response to the azoles varied from 47% to 81% of isolates. Yeasts were 100% susceptible to the polyenes and least susceptible to miconazole (48%), whereas isolates of MSH were most susceptible to natamycin (100%) and least susceptible to fluconazole (0%).

The complete article for this abstract can be found in the AAEP/EVJ Supplement at wileyonlinelibrary.com/journal/evj. These papers are free access therefore no log in information is required.
5. Discussion
Polyenes were effective in vitro against most fungal isolates. Because of its pharmacokinetic properties and safety, fluconazole may be an excellent choice to treat yeast infections. The choice of an antifungal for endometritis caused by mold should be based on in vitro susceptibility testing whenever possible.

Acknowledgments
The authors express profound thanks to Dr. Craig Altier and Ms. Rebecca Franklin for reviewing the Materials and Methods Section and to Dr. Patrick L. McDonough for helpful discussions during study preparation. The authors are also grateful to Dr. Patrick M. McCue for scientific input.