

Title: *Rhodotorula mucilaginosa* resistant to azole in captive bird droppings

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Abstract:

Birds are extremely popular animals as pets, where intimate contact between bird-man is observed. There is evidence of its importance in the spread of yeast to the environment as well as to other animals and humans. Constituents transient microbiota of birds and in feces, yeasts of *Rhodotorula* genus emerge in the setting of opportunistic fungal diseases, especially of the species *R. mucilaginosa*. Highlight is the lack of studies to monitor the presence of these microorganisms in these niches, and comparing their phenotype of antifungal susceptibility, the genotypic profile and city fountain. The aim of this study is compare the phenotype, the genotypic profile and city source of 34 specimens of *R. mucilaginosa* isolates of stool captive birds from cities of São Paulo northwest, south of Minas Gerais and East of Mato Grosso do Sul. The isolates were subjected to the microdilution in broth test (protocol M27-A3, CLSI), front to amphotericin B, ketoconazole, fluconazole and itraconazole. Subsequently, the electrophoretic profiles were determined by MSP-PCR, utilizing the M13 primer and compared by BioNumerics software, version 6.6. (Applied Maths), the Dice coefficient, UPGMA analysis. Is observed the emergence of *R. mucilaginosa* the scene of fungal infections, in addition to the intrinsic resistance to fluconazole, a fact confirmed in this study. Just as in human clinical samples, environmental isolates also showed resistance to itraconazole. The lack of correlation between the clonal isolates, although the percentage change from 72.7 to 96.6% and formation of six groups with more than 90% similarity, show genetic variability, since these microorganisms are exposed to various physical and chemicals agents in the environmental. *Rhodotorula mucilaginosa* isolates resistant to azoles are present in stool and captive birds, the alerting a public health problem, since it exposes to the risk of previously resistant fungal infections, particularly immunocompromised patients, children and elderly. Additional studies are needed to further elucidate the correlation of similarity between the isolates.

Keywords: *Rhodotorula mucilaginosa*, antifungal resistance, captive birds, MSP-PCR

Acknowledgement: CAPES