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Animal Model of Systemic Candidiasis Designed for Pharmacokinetics Studies

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***SUMMARY*. In the present work it was developed a disseminated candidiasis infection model to Wistar rats. The conditions of immunosuppression and the infecting ability of three species of Candida prevalent in nosocomial infections were tested for count of viable cells present in the kidneys and degree of tissue injury after 2 or 7 days of infection. Immunocompromised animals showed bigger weight loss and *C. albicans* was the most affected. The immunocompetent group infected by *C. albicans* groups showed Log CFU/g of 5.51 ± 1.56 and 7.29 ± 1.26 after 2 and 7 days, respectively. The *C. albicans* immunocompromised groups presented a higher yeast count after 2 days (Log CFU/g 6.43 ± 1.59) and all animals died within 4 days. *C. glabrata* and *C. krusei* immunocompetent groups presented Log CFU/g of 2.48 ± 1.46 and 2.98 ± 1.27 after 2 days, respectively, and cleared the infection after 7 days. In the immunocompromised groups the infection was more pronounced. The results showed the feasibility of disseminated candidiasis in rat, a new model able to be applied in pharmacokinetics studies, where this specie is traditionally used.**

KEY WORDS: Candida sp., Disseminated candidiasis, Experimental infection model, Microdialysis, Tissue penetration, Voriconazole, Wistar rats.

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