PM237 Mice infection with Candida glabrata biofilm cells: inflammatory cell recruitment and antifungal treatment efficacy

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Background: *Candida glabrata* is one of the most widespread *Candida* spp. associated to systemic candidiasis. This species is particularly critical in hospitalized, catheterized and immunosuppressed patients, due to a high drug resistance, specially to the azoles, but also to the ability to rapidly develop echinocandin resistance.

Objectives: The goal of this work was to simulate a systemic infection exclusively derived from *C. glabrata* biofilm cells and to evaluate the effectiveness of two echinocandins – caspofungin (Csf) and micafungin (Mcf) - in its treatment. The host-pathogen response was also studied, by analyzing the inflammatory cell recruitment.

Methods: CD1 mice were infected exclusively with 48 h-biofilm cells of *C. glabrata* and then treated with Csf or Mcf. After 72h, the efficacy of each drug was evaluated assessing organ fungal burden through CFU counting. Moreover, the immune cell recruitment into target organs was evaluated by flow cytometry and histopathology analysis.

Results: Fungal burden was higher in the liver than in the kidneys. Nevertheless, none of the drugs was effective in eradicating completely the infection. At the evaluated time point, flow cytometry analysis, showed a predominant mononuclear response in the spleen, which was also evident in liver and kidneys of the infected mice, as observed by the histopathology analysis. Together, these observations confirmed *C. glabrata* as a low inflammatory species and indicated that two-dose treatment with Csf and Mcf do not have a significant impact on liver and kidney fungal burden, or recruited inflammatory infiltrate, when mice are i.v. infected with *C. glabrata* biofilm-grown cells.