Murine infection models for *Aspergillus terreus* pulmonary aspergillosis reveal long-term persistence of conidia and liver degeneration.

Slesiona S, Ibrahim-Granet O, Olias P, Brock M, Jacobsen ID (2012) Murine infection models for *Aspergillus terreus* pulmonary aspergillosis reveal long-term persistence of conidia and liver degeneration. *J Infect Dis* 205(8), 1268-1277.

Details

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Abstract

Aspergillus terreus is emerging as a causative agent of life-threatening invasive aspergillosis. Prognosis for affected patients is often worse than for A. fumigatus infections. To study A. terreus-mediated disease, we developed 3 infection models. In embryonated hen's eggs and leucopenic mice, the outcome of invasive aspergillosis was similar to that described for A. fumigatus. However, 10(2)- and 10(3)-fold higher conidia concentrations were required for 100% lethality. In corticosteroid-treated mice, only 50% mortality was observed, although bioluminescence imaging revealed transient disease in all infected animals. In surviving animals, we observed persistence of ungerminated but viable conidia. Cytokine levels in these mice were comparable to uninfected controls. In contrast to A. fumigatus infections, all mice infected with A. terreus developed fatty liver degeneration, suggesting the production of toxic secondary metabolites. Thus, at least in mice, persistence and subclinical liver damage are unique features of A. terreus infections.

Beteiligte Forschungseinheiten

Mikrobielle Immunologie Ilse Jacobsen Mehr erfahren

Mikrobielle Biochemie und Physiologie Mehr erfahren

Leibniz-HKI-Autor*innen



Matthias Brock

Details



Ilse Denise Jacobsen

Details



Silvia Slesiona

Details

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