

A clinical-epidemiological and laboratory study of systemic fungal infections by *Cryptococcus spp*, *Histoplasma spp* and *Paracoccidioides spp* in a tertiary hospital

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Introduction: Systemic fungal infections continue to increase their incidence in immunocompromised patients, and those hospitalized with severe underlying diseases. Despite the greater number of cases, few studies report the Brazilian epidemiological reality. This study analyzed the demographic, epidemiological, clinical and laboratory characteristics, as well as the predictive factors of mortality, of patients affected by systemic mycoses caused by *Cryptococcus spp*, *Histoplasma spp* and *Paracoccidioides spp* treated at the Hospital de Clínicas of the Federal University of Uberlândia (HCU). **Materials and Methods:** A cross-sectional study was carried out by reviewing medical records of patients registered in the mycology database of the HCU Medical Laboratory, whose results of mycological tests were positive for *Cryptococcus spp*, *Histoplasma spp* and/or *Paracoccidioides spp*, from June 2016 to September 2018. The clinical and epidemiological data obtained from the patients' records were evaluated by univariate statistical analysis. **Discussion of Results:** 57 patients were included in this study; the majority were male, with a mean age of 47.26 years. Regarding lifestyle, current and previous-smoking, and current and previous-alcohol consumption were frequent, especially in patients infected with *Paracoccidioides spp*. HIV infection was the most prevalent comorbidity. The Charlson Comorbidity Index (CCI) and Average Severity Index Score (ASIS) were higher in patients with histoplasmosis and cryptococcosis. Mechanical ventilation was the most common invasive medical device used by the patients. About 25% of patients had a surgical history, and 20% had neutropenia during hospitalization. Nearly 30% of the patients died, particularly those infected with *Cryptococcus spp* and *Histoplasma spp*. The predictors of mortality were age, female, chronic lung disease, diabetes mellitus, kidney disease, higher CCI and ASIS, uses of central venous catheter, mechanical ventilation, enteral catheter and bladder catheter, besides neutropenia. There was no association between antifungal treatment and the poor outcome. **Conclusion:** The knowledge of the epidemiology of systemic fungal infections in tertiary hospitals, such as the HCU, will contribute to the implementation of public policies aimed at prevention, early diagnosis and appropriate treatment of individuals affected by these infections, thus ensuring a better prognosis for these patients.

Keywords: Systemic fungal infections, *Cryptococcus spp*, *Histoplasma spp*, *Paracoccidioides spp*

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