

TITLE: PATIENTS WITH INFECTED BY YEAST FROM THE HEMATOLOGY AND HEMOTHERAPY HOSPITAL FOUNDATION OF AMAZON: CASES OF 2014-2017

AUTHORS: SILVA, L.M.; FERREIRA, G.M.A.; MACEDO, M.M.; FERREIRA, W.A.; FERREIRA, C.M.

INSTITUTION: FUNDAÇÃO HOSPITALAR DE HEMATOLOGIA E HEMOTERAPIA DO AMAZONAS, MANAUS, AM (AVENIDA CONSTANTINO NERY, 4397, CHAPADA, CEP 69050-001, MANAUS – AM, BRAZIL); FUNDAÇÃO ALFREDO DA MATTA, MANAUS, AM (AVENIDA CODAJÁS, 24, CACHOEIRINHA, CEP 69065-130, MANAUS – AM, BRAZIL)

ABSTRACT:

The incidence of fungal infections has increased worldwide, especially in the hospital environment, representing one of the main infectious complications in hospitalized patients, particularly in patients with hematological diseases. The most common etiological agents responsible for infectious processes affecting hematologic patients, are *Candida* spp and *Cryptococcus* spp. The purpose of the present study was to detect the frequency of fungi isolated from patients with hematological diseases, hospitalized at the Hematology and Hemotherapy Foundation of Amazon and their susceptibility profile to antifungal drugs. The study was carried out from January 2014 to December 2017. Identification of the species and susceptibility tests were performed using the Vitek-2 compact. Of the total of 434 patients, 96%(417) were hospitalized patients and 4%(17) were outpatients; 62%(269) were male and 38%(165) female with the mean age of 25 years. In relation to hematological disease, 69% (300) had leukemia, 19%(82) anemia, 11%(48) lymphomas and 1%(4) other types of hematological diseases. From the total of 1.540 clinical samples, 63%(965) were from blood, 34%(520) from urine, 2%(40) from skin, and 1%(15) from liquor. The most frequent species were *Candida* spp. 43%(20), *Candida parapsilosis* 23%(11), *Candida tropicalis* 12%(6), *Candida famata* 6%(3), *Candida glabrata* 4%(2), *Candida guilliermondii* 4%(2), *Candida krusei* 2%(1), *Candida albicans* 2%(1), *Cryptococcus neoformans* 2%(1), *Cryptococcus laurentii* 2%(1). The susceptibility test showed resistance profile of the *Candida tropicalis* to Flucytosine (MIC 32 µg/ml), the *Candida krusei* to Flucytosine (MIC 8 µg/ml) and Fluconazole (MIC 16 µg/ml). According to the literature, candidemia is associated with mortality, and it is stated that resistance to azoles is prevalent throughout the world. The study demonstrated the resistance profile of two *Candida* isolates to antifungal agents most commonly used in the hospital, including Fluconazole. Cross-resistance between flucytosine and fluconazole has been frequently reported in many *Candida* species. The molecular study of these species, including their mechanisms of resistance and genetic factors related to virulence and fungal pathogenicity, are extremely important, as they will help clinicians in choosing the best therapeutic option for the patient.

Keywords: epidemiology, yeast, hematological disease