Clinical and laboratory features of invasive aspergillosis HIV-positive patients


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Background

Invasive aspergillosis (IA) in HIV-positive patients is not well understood.

Objectives

Analysis of underlying diseases, risk factors, etiology, clinical features, treatment and survival rates in HIV-positive patients with IA.

Materials and methods

Retrospective analysis of the register of patients with IA in 1998-2018 yy. For diagnosis IA we used criteria EORTS/MSG, 2008.

In group I we included 12 HIV-positive adult patients with IA from 25 to 52 yy (median – 34), males – 58%. The control group consisted of 545 adult patients with hematological malignancies, from 18 to 78 yy (median – 47), males – 58%.

Results

Clinical signs of IA in HIV-positive patients were nonspecific, the predominant symptom was fever – 83%, and increasing respiratory failure and hemoptysis were more often observed in HIV+ patients: 80% vs 43%, p = 0.008, and 17% vs 6%, p = 0.03, respectively.

The main sites of infection were lungs: 100% vs 98% (fig. 1).

Galactomannan test in BAL was positive in 42% vs 75% cases. Aspergillus spp. were isolated in 42% vs 44%, in all HIV+ patients the main etiological agent of IA was A.fumigatus: 100% vs 45%, p=0.001, (fig. 3).

Fig.1. CT scans: lungs lesion in HIV+ patients with IA

Fig.2. Bilateral psoas abscess with fistula and abscess of soft tissue. Destructive changes in the vertebral bodies L1, L3, Th 10

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Mixed fungal infection was detected in 33% vs 11% patients (p=0.001).

«Proven» IA was diagnosed in 17% vs 7% (p=0.02). Antifungal therapy was used in 100% vs 99% of patients; the most commonly used drug was voriconazole (58% vs 77%).

Twelve weeks overall survival rate was 80% vs 81%.

Conclusions

The features of invasive aspergillosis in HIV-positive patients were prolonged lymphocytopenia as a frequent risk factor (75%) and severe neutropenia as a rare risk factor (58%), more frequent mixed infection (33%), and high rate of dissemination (17%). The only etiology agent was A.fumigatus. The overall 12-week survival did not differ in the studied groups (80% vs 81%).