P0151 Invasive aspergillosis caused by “rare” pathogens

Olga Shadrivova¹, Igor Ryabinin¹, Ekaterina Desyatik¹, Yuliya Borzova¹, Alisa Volkova², Marina Popova², Tatyana Bogomolova¹, Ludmila Zubarovskaya², Boris Afanasyev², Natalya Vasilyeva¹, Nikolai Klimko*¹

¹ North-Western State Medical University named after I.I. Mechnikov, Saint-Petersburg, Russian Federation, ² I.Pavlov First Saint Petersburg State Medical University, Saint-Petersburg, Russian Federation

Background: Publications describing invasive aspergillosis (IA) caused by “rare” pathogens are limited.

Materials/methods: Retrospective analysis of the 780 patients with IA caused by “rare” pathogens in 1998-2018 yy. For the IA diagnosis EORTC / MSD, 2008 criteria were used.

Results: In 227 patients Aspergillus spp. were isolated. The “rare” pathogens were detected in 18 (8%), and these patients were included in group I; age varied from 5 to 67 years, median – 40.5, males – 50%. The control group consisted 209 patients with “common” Aspergillus spp. (A. fumigatus, A. niger and A. flavus), from 1 to 99 years old, median - 47, males – 53%. IA caused by “rare” pathogens, more often occurs in children (22% vs 11%, p < 0.05). In addition to standard risk factors, in these patients more often was detected lymphocytopenia 67% vs 55%, with duration 21 vs 14 days, p < 0.05, less frequent was noted fever (46% vs 78%, p < 0.05), but significantly more lung damage accompanied by hemoptysis (17% vs 10%, p < 0.05). “Rare” pathogens were A. ustus – 38%, A. nidulans – 22%, A. calidoustus – 8%, A. versicolor – 8%, A. glaucus – 8%, A. candidus – 8%, and A. sydowii – 8%. In “common” group etiological agents were A. fumigatus – 52%, A. niger – 31%, A. flavus – 17%. Two or more species of Aspergillus were isolated in 44% vs 9%, p < 0.05. Antifungal therapy was used in 100% vs 97% of patients. Twelve weeks overall survival rate was 82% vs 81%. In the group with “rare” pathogens more frequently observed relapse of IA – 33% vs 12%, p < 0.05.

Conclusions: Patients with “rare” pathogens account for 8% of patients with isolated Aspergillus spp. cultures. IA caused by "rare" pathogens, more often occurs in children – 22%. The features of IA caused by “rare” pathogens are: long-term lymphocytopenia (67%, median - 21 days), combination of two or more pathogens – 44%, high relapse rate – 33%. Survival of patients with “rare” pathogens does not differ from the total cohort of patients – 82%.