

**P0144 Dynamics of immunological parameters in patients with allergic bronchopulmonary aspergillosis during antifungal therapy**

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**Background:** To study the dynamics of immunological parameters in patients with ABPA during antifungal therapy.

**Materials/methods:** In prospective study included 11 patients with ABPA at the age from 29 to 78 years (median - 36 years). Allergy examination included skin tests with allergen *Aspergillus*. The levels of total IgE («Polignost», Russia) and specific IgE (sIgE) to *A. fumigatus* allergens («Alcor Bio», Russia) in serum were determined by enzyme immunoassay. Spontaneous production of IFN- $\gamma$  was determined in the culture supernatant of cells without the addition of inducers. To assess the mitogen-induced production of IFN- $\gamma$ , blood cells were incubated for 24 hours with PHA («Sigma», USA). The production of IFN- $\gamma$ , activated by the allergen *A.fumigatus* («Alcor Bio», Russia) at a concentration of 10  $\mu\text{g/ml}$ , was determined on day 6. The resulting supernatants were used to determine spontaneous and induced IFN- $\gamma$  production by enzyme immunoassay using commercial test systems («Vector-Best», Russia).

**Results:** The prick test with *A.fumigatus* was positive, levels of sIgE to *A.fumigatus* (Me 1.56 (0.36  $\div$  10.56) IU/ml) and total IgE (Me 986 (873  $\div$  1695) IU/ml) were elevated in all ABPA patients. During the study, patients with ABPA were treated with itraconazole 400 mg per day for 12 weeks. At a re-examination at 12 weeks, all patients had a statistically significant decrease in the level of sIgE to *A.fumigatus* (Me 0.66 (0.01  $\div$  5.24) IU/ml,  $p = 0.003$ ) and total IgE (Me 540 (73  $\div$  613) IU / ml,  $p = 0.003$ ). Was identified increased ability of blood cells to produce IFN- $\gamma$  in response to PHA stimulation of the blood cells (1914 (1294  $\div$  2232) vs 910 (852  $\div$  1648) pg / ml,  $p = 0.004$ ) and to induction by the *A. fumigatus* allergen (48,0 (24.0  $\div$  61.0) vs 19.0 (2.0  $\div$  34.0) pg / ml,  $p = 0.001$ ). The absolute number of eosinophils decreased ( $p = 0.05$ ).

**Conclusions:** The tendency towards normalization of the immunological profile of patients in association with clinical signs improvement indicates the successful antifungal therapy in patients with ABPA.

