Case of successful treatment of invasive aspergillosis in girl with systemic lupus erythematosus

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Objectives
Publications about invasive aspergillosis (IA) in children with systemic lupus erythematosus are limited.

Materials and methods
For diagnosis of IA we used criteria EORTC/MSG, 2008.

Results
16-year-old girl was hospitalized in children’s hospital with joints pain, and prolonged fever in February 2018. Systemic lupus erythematosus was diagnosed in 2015. She received prednisolon 1 mg/kg/day for 3 months. On the 20th day of hospitalization pulmonary symptoms appeared. She was in acute respiratory distress (respiratory rate 40 breaths/min) and required intubation and transfer to the intensive care unit. On examination, she was hypoxic with FiO2 - 55%, PO2 - 43%, presented with an episode of profuse epistaxis and oliguria. On the 23th day of hospitalization the patient developed ventricular fibrillation and had a sudden cardiac arrest. Resuscitation measures were successful. She was in a state of unconsciousness. Examination bronchoalveolar lavage (BAL) revealed numerous septate fungal hyphae with 45° branching compatible with Aspergillus spp. BAL culture yielded A. niger.

On the 23th day of hospitalization a chest X-ray showed bilateral interstitial infiltrates, infiltrative changes in S3 of the left lung, consolidation of the lower lobe of the left lung.

Examination bronchoalveolar lavage (BAL) test and galactomannan test were negative.

The patient received caspofungin 70 mg on day 1 and 50 mg/day from day 2.

On the 12th and 23th days treatment repeated thorax CT revealed cavities in S6 of the right lung, and abscesses on the right lung.

Her renal function and hematological parameters improved gradually as she became hemodialysis free, on day 19 of antifungal therapy caspofungin was replaced with voriconazole 400 mg/day. Voriconazole was discontinued on the 59th day of therapy. The patient’s condition was good and chest CT scan improved.

Conclusions
Patients with systemic lupus erythematosus often require glucocorticoids and other immunosuppressive agents to induce remission or lower disease activity. In these circumstances, it is necessary to remember the possibility of developing invasive aspergillosis.