

VATS-lobectomy in a child for congenital lobar emphysema complicated by mycobacteriosis and cryptococcosis: a clinical case and literature review

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Conflict of interest: none

ABSTRACT. An asymptomatic 9-year-old girl was found to have a destructive formation in the upper lobe of the left lung. Taking into account the localization of the pathological process, its radiological characteristics and epidemiological risks, a preliminary diagnosis of pulmonary tuberculosis was established, although GeneXpert in sputum was negative 3 times. In this regard, the patient received standard antituberculosis chemotherapy for 6 months in accordance with current clinical protocols. However, against the background of the treatment, not only no positive dynamics were achieved, but on the contrary, there was a progression of destructive changes in the lung tissue, which was manifested by an increase in the decay cavity and structural restructuring of the affected lobe. Taking into account the localized nature of the lesion, the lack of effect from conservative treatment, and with the aim of final verification of the diagnosis, a decision was made to carry out surgical intervention (upper VATS-lobectomy on the left) for both therapeutic and diagnostic purposes. The contents of the focus were sent for microbiological examination: GeneXpert was negative, cultured on liquid and dense medium – no growth of *Mycobacterium tuberculosis* was detected. Histologically: lobar emphysema, complicated by cryptococcosis (cryptococcoma) in association with mycobacterial infection (probably mycobacteriosis), of long-term development. The presented clinical case demonstrates the difficulty of differential diagnosis of localized destructive lung lesions in children in the absence of clinical symptoms. The negative results of multiple microbiological and molecular genetic studies

on *M. tuberculosis* combined with the progression of morphological changes in lung tissue against the background of standard anti-tuberculosis therapy indicated the non-tuberculous nature of the pathological process. Surgical intervention followed by histopathological examination of the resected lung tissue became the decisive stage of the final diagnostic verification and made it possible to determine further treatment tactics. This case emphasizes the expediency of timely application of surgical methods in children with localized chronic destructive lung lesions in the absence of effect from conservative treatment.

KEY WORDS: pulmonary mycobacteriosis in children, VATS-lobectomy, differential diagnosis.
