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ABSTRACT BOOK

ORGANIZATIONAL SUPPORT: ZITA CONGRESS

Contact person: Thanasis Liagkis, Address: Omirou 29, Peta Saronikou, 19001, E-mail: t.liagkis@zita-congress.gr, www.zita-group.com, Tel.: +30 22994 40968

RESULTS OF SURGICAL TREATMENT IN PATIENTS WITH LUNG APLASIA AND AGENESIS AND CORRECTION OF ASSOCIATED MALFORMATIONS - Danylo Krivchenya[1], Yevhen Rudenko[1,2], Oleksandr Dubrovin[1], Vasyl Pritula[1], Tatiana Krivchenya[3]

[1]Bogomolets National Medical University, Kyiv, Ukraine. [2]National Specialized Children Hospital "OHMATDYT", Kyiv, Ukraine. [3]University of Michigan, Ann Arbor, USA

Aim of the Study. Patients with lung aplasia or agenesis are rare, and they are at increased risk of mortality and morbidity, especially in presence of associated defects. Pathogenesis of respiratory distress, possibilities of surgeries and long-term results have not been sufficiently studied. The aim was to study long-term results of diaphragm translocation and simultaneous surgeries in single-lung patients.

Methods. The retrospective study included six single-lung patients aged from 1 day to 7 years (mean 23.8±12.9 months) by the start of the treatment. A lifetime investigation of anatomy and pathophysiology was performed using radiological, endoscopic and functional methods. Long-term results of diaphragm translocation and simultaneous surgeries were analyzed.

Main results. Diaphragm translocation was used in 2 patients with isolated right or left lung aplasia. Surgeries for associated malformations (n=4) included correction of esophageal atresia (n=1), tracheal stenosis and VSD (n=1), complete atrio-ventricular canal defect, PDA, annular pancreas, intestinal malrotation, and anorectal atresia (n=1), hiatal hernia and tracheal stenosis (n=1). Five of six (83%) patients survived and in all of them good and excellent long-term results were obtained. Both patients with diaphragm translocation performed for the first time in the world, had no respiratory symptoms at 26 and 18 years follow-up, and gave birth to healthy children.

Conclusions. Diaphragm translocation reduces the cavity and prevents mediastinal shift, airway kinking and rotation, decreases diaphragm function, and limits the progression of single lung emphysema. Associated malformations should be corrected gradually thus giving the child a chance to survive and normalize vital functions.