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The Assessment of Primitive or Metastatic Malignant Pulmonary Tumors in Children

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Abstract

Background: The purpose of our study is to assess primitive and secondary malignant pulmonary tumors in children. The presence of lung tumors in newborns and infants is a point of interest to specialists in pediatric surgery, thoracic surgery and genetics due to the high death rate. The 5-years survival rate communicated by EUROCARE-study is less than 10% for primitive tumors and less than 15% in lung metastases.

Materials and Method: We performed a retrospective study which analysed 11 children with pulmonary primary or metastatic tumors admitted in the Pediatric Surgery Department "Prof. Dr. Al. Pesamosca" of the Emergency Clinical Hospital for Children "Maria Sklodowska Curie", Bucharest. The analysed and operated patients underwent surgery by Prof. Dr. Al. Pesamosca and the authors during the period of 1985-2011. In our series there where 4 primitive lung tumors and 7 secondary ones: 8 underwent surgery and 2 died before being operated on. The incidence of primitive pulmonary lung malignancies is higher for females, 3 to 1, and secondary ones are more frequent in males, 6 to 1.

Results: Patients with primitive pulmonary malignancies were late diagnosed. Their age ranged between 1 to 6 years; 3 were operated on, out of which 2 died, and 1 operated still survives. The 7 patients with secondary pulmonary malignancies were late diagnosed, too, probably as a consequence of a late diagnosis of the origin tumor.

Conclusions: Even if all malignancies require an early diagnosis and treatment, this aim regarding malignant lung tumors is still a desideratum animating all practitioners. Primitive tumors are diagnosed presenting the main clinical manifestation a bronchopulmonary infection. Secondary lung malignancies are usually asymptomatic and are diagnosed when monitoring a patient for a malignancy with another origin. Chemotherapy, radiotherapy and surgery of malignant primitive tumors or metastatic ones in children remain unsatisfactory because of the late diagnosis and the limited methods of treatment. Nowadays genetics identified the responsible oncogenes for pulmonary blastic explosion and better results could be obtained by genetic surgery.

Key words: primitive lung tumor, secondary lung tumor, metastasis, children, thoracoscopy, bronchoscopy, cytodiagnosis

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