Abstract Group: 10.2. Tuberculosis
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Title: The role of multinuclear macrophages for diagnosing pulmonary tuberculosis with application of cytospin-preparation – Review of 152 cases

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Body: Introduction: Despite recent advances in bacteriological diagnostics of pulmonary tuberculosis (PTB), in many smear negative cases establishing diagnosis remains problem. Macrophages, have long been thought of as the primary intracellular niche for M. tuberculosis Aim: The aim of this study was: to assess the utility of Cytospin-preparation for the recognition of macrophages in bronchial washing and definition of it’s the diagnostic value; gaining a better understanding of the cellular processes that protect the lung during infection. Methods: Bronchial washings of 152 PTB-suspected patients were studied in National Center for Tuberculosis and Lung Diseases in 2009-10 years for multinuclear macrophages, which was cytological confirmation of PTB. These data were compared to bacteriological results - “gold standard”. Results: Among 152 PTB-suspects’ bronchial washings multinuclear macrophages was found in 34 patient. From them cultural confirmation of PTB was in 24 cases. 118 bronchial washings didn’t contained macrophages, but in 14 cases culture was positive. Specificity of cytological method - Cytospin-preparation was 91,23% and sensitivity 63,16%. +PV was 70,6% and –PV=11,89%; +LR=7,20 and –LR=0,40. Conclusion: Cytospin-preparation showed high specificity and mild sensitivity for diagnosis PTB and can be thought as one of the most valuable diagnostic tool. Multinuclear macrophages may be defined as diagnostic criteria for tuberculosis, though further similar researches are needed.