

INCREASED LEVELS OF ENDOSTATIN AND DECREASES LEVELS OF CATHEPSIN V IN BRONCHOALVEOLAR LAVAGE FLUID OF PATIENTS WITH PULMONARY SARCOIDOSIS

W.Naumnik^{1,2}, M. Ossolińska¹, I. Płońska³, E.Chyczewska¹ and J. Nikliński²

¹Department of Lung Diseases, Medical University of Białystok, ul. Zurawia 14, 15-540, Białystok, Poland, wojciechnaumnik@gmail.com

²Department of Clinical Molecular Biology, Medical University of Białystok

³Municipal Hospital in Białystok

Recently Cathepsin K, L and S were found in bronchoalveolar lavage fluid (BALF) from patients with sarcoidosis (BBS). Lack of Cathepsins (K,L,S) prevent the development of lung granulomas in a mouse model of BBS. There is no data about Cathepsin V (Cath V) in BALF in humans. Endostatin, an antiangiogenic peptide, is a novel inhibitor of distal lung epithelial cells and primary type II cells. The role of this protein in BBS is not determined. IL-18 levels in BALF reflect activity of sarcoidosis.

The aim of this study was to evaluate the concentration (Elisa) of Endostatin, Cath V and IL-18 in BALF of BBS patients (during diagnostic procedure). We studied 22 BBS patients (stage II). The age-matched control group consisted of 20 healthy subjects. Cath V concentration were lower in BBS than in healthy group (16.03 ± 8.6 vs 32.25 ± 21.9 pg/ml, $p=0.004$). Both Endostatin and IL-18 levels were higher in BBS than in control group (0.88 ± 0.3 vs 0.29 ± 0.04 ng/ml, $p=0.028$; 40.37 ± 31.6 vs 14.61 ± 1.3 pg/ml, $p=0.007$). In BBS group we found correlations between the levels of Endostatin and IL-18 ($R=0.74$, $p=0.0002$) as well as Endostatin and DLCO ($R=-0.6$, $p=0.013$). Receiver-operating characteristic (ROC) curves were applied to find the cut-off the serum levels of Cath V, Endostatin and IL-18 in BALF (BBS vs Healthy: Cath V 28.082 pg/ml, Endostatin 0.391 ng/ml, IL-18 14.213 pg/ml). We conclude that Cath V and Endostatin may present as an important factors of pulmonary sarcoidosis activity.