

Interstitial lung diseases

OPG/sRANKL signalling system in pulmonary sarcoidosis: the bronchoalveolar lavage study.

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Question. Osteoprotegerin (OPG), a soluble tumour necrosis factor receptor family molecule, protects endothelial cells from apoptosis in vitro and promotes neovascularization in vivo. Angiogenesis may be crucial for the course and outcome of sarcoidosis. In this study, we evaluated the clinical usefulness of OPG and its ligand, soluble receptor activator of nuclear factor-kappaB ligand (sRANKL) in BronchoAlveolar Lavage Fluid (BALF) of patients with sarcoidosis (BBS, Besniera-Boeck-Schaumann disease).

Methods. We studied 22 BBS patients and 15 healthy volunteers as the control group. The levels of OPG, sRANKL and IL-18 were measured by Elisa method.

Results. The BALF levels of sRANKL and IL-18 were higher in BBS group than in control [sRANKL: 2.12 (0.82-10.23) vs 1.12 (0.79-4.39) pmol/l, p=0.03; IL-18: 34.29 (12.5-133) vs 13.05 (12.43-25) pg/ml, p=0.001]. There were no significant differences between concentrations of OPG in BBS patients and healthy [0.22 (0.14-0.8) vs 0.23 (0.14-0.75) pmol/l]. In BBS group we found positive correlations between the levels of sRANKL and IL-18 in BALF (R=0.742, p=0.00007) as well as negative between OPG and DLCO (R=-0.528, p=0.029). Receiver-operating characteristic (ROC) curve was applied to find the cut-off the BALF levels of sRANKL (BBS vs healthy: 1.8 pmol/l).

Conclusion. We conclude that sRANKL may have usefulness in clinical evaluation of BBS patients.