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Title: BALF TNFα level in relation to inflammatory status and phenotype of sarcoidosis

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Body: Determining the inflammatory status of the disease may be helpful in predicting the prognosis and responsiveness to treatment. Aim: To evaluate the relation of BALF TNFα levels to the inflammatory status and phenotype of sarcoidosis. Material and methods We have measured: TNFα, TGFβ,IL2, IL2R, IL12, IL10 in BALF and TNFα, TGFβ,IL2, IL12, IL10 levels in serum in 184 sarcoid patients. We checked for the correlations between BALF TNFalpha and cytokines, selected systemic inflammatory markers and clinical factors (age, duration of the disease, PFT, 6MWT, extrapulmonary involvement). Results We have found important positive correlation between concentration of BALF TNFα and: - BALF: IL2R(r=0,4676, p=0,0001), IL12 (r=0,4545, p=0,0001) and serum: IL12 (r=0,26, p=0,001), IL10 (r=0,2832, p=0,001), TNFα (r=0,1871, p=0,12). - serum CRP(r=0,2427, p=0,003), γglobulins(r=0,1648, p=0,033), Ddimers(r=0,1685, p=0,035). - the age of patients (r=0,16, p=0,029), No relation was found between the BALF TNF alpha and the duration of the disease, PFT (except for FEV1 r=-0,1464, p=0,05), 6MWT, extrapulmonary sarcoidosis (liver and spleen dimensions, hepatic enzymes, protrombine), Ca and P serum nor urine levels. Weak but important negative correlation was observed between BALF TNFα and monocytosis(r=-0,1788, p=0,015). Conclusion In our group of patients: The BALF cytokine inflammatory status reflects the systemic inflammation (measured by the serum cytokine network and non-specific inflammatory biomarkers). The BALF TNFα status has no relation to the phenotype of sarcoidosis.