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Title: Imbalance of M1/M2 alveolar macrophages phenotype in pulmonary sarcodosis

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Body: Imbalance of Th1/Th2 components of the immune system and M1/M2 macrophages phenotype, respectively, play a critical part in pulmonary sarcoidosis (PS) development regardless of the disease state.Objective: assessment of M1/M2 alveolar macrophages (AM) phenotype imbalance in PS of various state and healthy volunteers (HV).Methods: AM phenotype in patients with newly diagnosed PS (n=15, 41,72±3,89 y.o.), recurrent PS (n=15, 44,10±5,06 y.o) and HV (n=10, 51,83±3,52 y.o.) was assessed by flow cytometry (Beckman Coulter FC500) by surface macrophages markers CD80, CD25 and CD163, CD206, typical for M1 and M2 phenotype, respectively.Results: AM population in all patients with PS and HV was not monophenotypical. In newly diagnosed PS percent of M1 markers CD25 and CD80 was 1.3 and 4 times increased vs HV. The content of M2 marker CD163 was not significantly changed, and CD206 was 1.7 times decreased as compared to HV. In recurrent PS CD25 was 1.5 times increased and CD80 – 3.5 times increased vs healthy, and the content of M2 markers was not significantly changed as compared to HV. Conclusion: In PS regardless of the disease state AM predominantly possess M1 phenotype. Imbalance of M1/M2 AM phenotypes towards M1 macrophages is more expressed in newly diagnosed pulmonary sarcoidosis.