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Title: IL-17a expression in transbronchial biopsy samples in sarcoidosis

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Body: Background: Th17 is a new subset of CD4(+) T cell population and characterized by the release of cytokines such as IL-17A, IL-17F and IL-22. Multiple studies in humans and animals have described the role of Th17 cells in the pathogenesis of several autoimmune and chronic inflammatory diseases such as psoriasis, inflammatory bowel diseases, tuberculosis and lung fibrosis. Aim: To determine the possible role of Th17 cells in the pathogenesis of sarcoidosis by evaluating the IL-17A levels in lung biopsy samples of sarcoidosis patients. Method: IL-17A expression was evaluated with immunohistochemical analysis. The area that had higher IL-17A antibody positivity was evaluated with x40 magnification and the positive staining inflammatory cells (macrophage and lymphocyte) were counted. Results: A total of 41 sarcoidosis patients [32(78%) female] with the mean age of 48 years were included in the study. Among them 22(54%) were diagnosed as Stage 1, 17(42%) as Stage 2, 1(2%) as Stage 3 and 4 sarcoidosis. In the whole study group only 2 (5%) patients had no IL-17A(+) inflammatory cells. In the remaining, 9(22%) patients had one IL17A(+) staining cell, 15(37%) had 2 cells, 5 (12%) had 3 cells, 9 (22%) had 4 cells and 1(2%) had 5 cells. The IL-17A (+) staining cells were identified at the periphery of the granuloma. No statistically significant correlation was identified between the number of IL17A(+) staining inflammatory cells and plasma ACE levels, CD4/CD8 ratio and the stage of the disease (p> 0.05). Conclusion: The identification of IL17A (+) staining inflammatory cells in the periphery of the sarcoidosis granulomas, may indicate that Th17 cells have an important role in the pathogenesis of sarcoidosis.