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Title: Isolated lymphocytic bronchiolitis with B cell clonality: Diagnosis in 3 cases using immunoglobulin gene rearrangement analysis

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Body: Background Lymphocytic bronchiolitis is characterised by diffuse infiltration of the bronchiolar walls by lymphocytes, which may organise into germinal centres (follicular bronchiolitis). B cell clonality demonstration may result in a diagnosis of low- grade B-cell lymphoma Patients and methods: Patient #1: 59-yr old female, non-smoker, presented with chronic cough, dyspnea, sicca syndrome, negative anti-SSA/SSB antibodies, severe airflow obstruction, ground glass opacities at HRCT, and 51% of lymphocytes at BAL. Patient #2: 54-yr old female, non-smoker, presented with chronic cough, restrictive lung disease, diffuse micronodules at HRCT, 90% lymphocytes at BAL, monoclonal IgG lambda of 4.2 g/l. Patient #3: 66-yr old female, non-smoker, with history of rheumatoid arthritis and Sjögren syndrome, anti-SSA and -SSB antibodies, presented with hemoptysis, Bence-Jones protein, airflow obstruction, 2 lung amyloid nodules and multiple cystic lung disease. Results: Lung biopsy with immunohistochemistry demonstrated lymphocytic bronchiolitis in all three cases with a majority of CD 20 positive B –cell. PCR-based DNA testing for immunoglobulin gene rearrangement analysis of lung biopsy demonstrated B-cell clonality in all three cases (VK-JK, FR1-JH), and low-grade MALT lymphoma was eventually diagnosed. Conclusions: Lymphocytic bronchiolitis may correspond to low-grade MALT lymphoma which may be demonstrated by gene g rearrangements rearrangement analysis.