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Title: Inflammatory markers in serum and lavage fluid in young adult's patients with postinfectious bronchiolitis obliterans

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Body: The aim of the present study was to determine the myeloperoxidase (MPO), neutrophil elastase(NE) and α1 proteinase inhibitor (α1–Pi) in serum and bronchoalveolar lavage fluid (BALF) in patients with postinfectious chronic bronchiolitis. We studied 28 patients (age range was from 18 to 32 years with a mean age of 19,7 ± 1,13 years) in exacerbation and minimal activity period. It was obtained a significant increase in/of MPO level in serum and BALF in patients with exacerbation of the disease (787,8 ± 73,6 ng / ml and 79 - 110 ng / ml, respectively). MPO levels in the sputum (brush-biopsy) and in BALF of patients with minimal activity was: 242,1 ± 17,8 ng / ml and 15-18 ng / ml, respectively. Similar changes were observed for NE activity. Exacerbation significantly increased NE activity in serum (an exacerbation of 515 ± 63,4 nM / ml min, with minimal activity indicators NE were 271 ± 26,5 nM / ml min) and in BALF (sharpening and minimal activity - $p < 0,001$). α1–Pi level in BALF was significantly higher to compare with normal only at minimal activity period ($p<0.05$). We concluded that protease/antiprotease imbalance take place in airways of patients with bronchiolitis obliterans especially at exacerbation of the disease. These data reflect the local inflammatory processes and may serve as informative material to use to assess the severity of chronic bronchiolitis.