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Title: Levels of antimicrobial peptide LL-37 in BALF and ELF from patients with pulmonary fibrosis

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Body: LL-37 antimicrobial peptide is the only human cathelicidin involved in tissue repair. Recent reports indicate a significant role of LL-37 in different lung pathologies, especially connected with lung tissue remodeling. Up to date, no data are available concerning the role of LL-37 in fibrotic lesions in lungs. The aim of presented work was to study the LL-37 levels in patients with lung fibrosis. BALF (bronchoalveolar lavage fluid) samples were collected from 22 patients with lung fibrosis and 12 healthy individuals. Measurement of LL-37 concentration in BALF was performed by mass spectrometry. Based on urea level, concentration of LL-37 in epithelial lining fluid (ELF) was calculated. LL-37 level was significantly higher in BALF from patients with pulmonary fibrosis (median: 13.32 pg/ml, 25th-75th percentile: 8.20-24.40) compared to healthy persons (median: 6.38 pg/ml, 25th-75th percentile: 4.90-11.55). The identical pattern was kept when LL-37 concentration was calculated in ELF however the difference was not statistically significant. We noted augmented levels of LL-37 in lung fibrosis. This significant alteration of cathelicidin concentration suggests a role of LL-37 during fibrotic lung tissue remodeling. This study was supported by the Polish Ministry of Science and Higher Education (Grant No. 402 056 32/1659).