

## **THE PATTERN OF CHANGES IN FORCED OSCILLATORY PARAMETERS IN PATIENTS WITH LUNG DISEASES**

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Forced oscillation technique (FOT) is becoming increasingly widespread measurement method used for assessment of lung functions. In the present study authors attempt to determine the pattern of the oscillatory parameters changes evaluated through FOT in patients with different lung diseases. 54 patients with interstitial lung diseases (aged  $64,5 \pm 8,27$ ), 23 patients with obstructive pulmonary diseases (aged  $68,7 \pm 10,19$ ) and 36 patients after thoracic surgery (aged  $65,5 \pm 9,61$ ) were enrolled in the study. All patients performed lung function tests (spirometry- FEV<sub>1</sub>, FVC, FEV<sub>1</sub>/FVC, plethysmography- Raw, TLC, RV, in patients with ILD additionally lung diffusion for carbon monoxide - DLCO), 6-minute walk test (6MWT), muscle strength evaluation (grip strengths) and a test using the forced oscillation technique (Rrs 5Hz, Rrs 11Hz, Rrs 19Hz, Rrs 5-19Hz, Xrs 5Hz, Xrs 11Hz, Xrs 19Hz, delta XRS, fres). The ANOVA Kruskal-Wallis test followed-by a multiple comparison test were used to evaluate the differences in oscillatory parameters between-groups. There were statistically significant differences, depending on lung disease, in resistance at frequencies 5 Hz, 11 Hz, reactance at frequencies 5 Hz, 11 Hz, 19 Hz, expiratory flow limitation and resonant frequency ( $p=.002, .036, .017, .001, .000, .000$  and  $.028$ , respectively). Based on obtained results we identified the patterns of some oscillatory values changes in patients with lung diseases, where the highest values of resistance and reactance parameters were observed in patients with obstructive pulmonary diseases whereas the lowest were noticed in patients with interstitial lung diseases.