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Functional features in interstitial lung diseases

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Abstract

Background: Interstitial lung diseases (ILD) are a group of disorders that are generally thought to commonly share a restrictive ventilatory defect and reduced diffusing capacity for carbon monoxide (DLCO). The aim was to find distinctive features of the pulmonary function tests (PFT) results in different types of ILD.
Material and methods: We conducted a retrospective study of 40 consecutive patients with ILD admitted to the Institute of Pthisiopneumology, Chisinau, the Republic of Moldova, during January 2019 – February 2020. The cohort included 10 cases of sarcoidosis patients, 8 cases of idiopathic pulmonary fibrosis (IPF) patients, 7 patients with nonspecific idiopathic interstitial pneumonia, 9 cases with hypersensitivity pneumonitis (HP) and 6 histiocytosis cases. All patients have been evaluated by pulmonary function tests (PFT), 6 minutes walk test, Medical Research Council scale for dyspnea, etc.
Results: Overall, we found normal mean spirometry parameters, a slightly increased mean residual volume (127.5±42.1), a mildly decreased mean total lung capacity (88.8±22.3) and moderately reduced DLCO (52.6±21.5). We found a dominant restrictive pattern in 75% of patients, and obstruction only in 7.5% when we used spirometry parameters. When we applied the bodyplethismographic values, we have found that an *air-trapping* pattern was identified in 32.5% cases of patients. This pattern has been identified in 1/3 of HP patients and in 10% of sarcoidosis patients.
Conclusions: PFT can help identifying individual features of different types of ILD being able to show even obstructive changes in a group of diseases thought to be strictly restrictive.
Key words: interstitial lung diseases, pulmonary function tests, obstruction, restriction.

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