

DOI: 10.5152/TurkThoracJ.2019.158

[Abstract:0790] OP-009 [Accepted: Oral Presentation] [Clinical Problems - Diffuse Parenchymal Lung Diseases]

Can Serum Lactate Dehydrogenase Level be Used for Predicted to IPF Clinical Severity?

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Objectives: Serum lactate dehydrogenase (LDH) is a marker of cell damage and may be reflect pulmonary fibrosis. In a recent studies represented LDH level may related to pathogenesis and prognosis of idiopathic pulmonary fibrosis (IPF). We aimed to investigated relationship between serum LDH level and IPF severity.

Methods: We retrospectively evaluated 42 patients (female/male 9/28) with IPF. The demographic parameters, pulmonary function tests, diffusion test, 6-minutes walk test and IPF stage were recorded.

Results: The mean age of the patients was 66.9±6.0 (range 53-78) years with 33 (78.6%) men. Among our cohort 31 (73.8%) were current or ex-smokers with a mean exposure of cigarette 37.5 pack-years. The mean GAP point was 4.2±1.4. The most common IPF stage was 2 (25 59.5%) and mean serum LDH level was 255.5±43.2 U/L (range 161-332). In our laboratory the cut of serum LDH level was 247 U/L. Serum LDH was increased in 26 (61.9%) of IPF patients. In patients with higher serum LDH level had higher GAP score (4.6±1.3 vs 3.6±1.2 p=0.020), lower FVC % predicted (62.8±15.8 vs 77.9±16.8, p=0.006) and FEV₁ % predicted (67.8±16.9 vs 80.31±14.4 p=0.019) than normal LDH group. There was no significant differences between serum LDH level and age, gender, GAP score, DLCO, FEV₁/FVC ratio.

Conclusion: In IPF patients increased serum activity of serum LDH may represent a marker of IPF stage. Future research is needed to determine the serum LDH level importance in IPF patients.

Keywords: GAP points, Idiopathic pulmonary fibrosis, LDH, Stage