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Title: KL-6 compared to LDH as a prognostic factor in Caucasian patients with idiopathic pulmonary fibrosis

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Body: BACKGROUNDS: Idiopathic pulmonary fibrosis (IPF) is a fatal lung disease with a poor prognosis. Little is known about sensitive prognostic markers for IPF. AIMS: The aim of our study was to investigate the significance of KL-6 compared to LDH as a prognostic marker in Caucasian patients with IPF. METHODS: We prospectively collected 79 Caucasian patients with IPF. Serum samples were obtained at enrollment. Serum levels of KL-6 and lactate dehydrogenase (LDH) were measured by ELISA and the correlation between baseline serum levels of the markers and the survival was evaluated. RESULTS: Median follow-up period was 372 (1-7088) days. Sixteen (20%) patients died during follow-up. There was no significant difference in the baseline serum KL-6 levels between patients who survived and not survived. Receiver operating characteristic (ROC) curve analysis for predicting non-survival showed larger area under the curve for KL-6 than LDH (0.617 and 0.553, respectively). When the cut-off levels of 1300 U/mL for KL-6 and 280 IU/L for LDH were set, sensitivity, specificity and accuracy for predicting non-survival were 81%, 60% and 66% for KL-6 and 56%, 51% and 52% for LDH. In Kaplan-Meier analysis, patients with baseline serum KL-6 level $\geq$1300 U/mL showed shorter survival compared with patients with baseline serum KL-6 level <1300 U/mL (p=0.02). LDH showed no statistical impact on the prognosis (p=0.20). In multivariate analysis, baseline serum KL-6 level $\geq$1300 U/mL was an independent predictive factor for poor prognosis (hazard ratio=4.46; p=0.030). CONCLUSIONS: Baseline serum KL-6 level $\geq$1300 U/mL is an independent predictive factor for poor prognosis in Caucasian patients with IPF.