SERUM KL-6 LEVELS IN LUNG CANCER

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[Background] Serum levels of soluble MUC1 mucin detected by anti-KL-6 monoclonal antibody are widely used as an indicator of the activity of interstitial lung disease. It is also well known that serum KL-6 levels are often elevated in the sera of lung cancer patients. KL-6 has some potential to be used as a tumor marker of lung cancer.

[Purpose] The aim of this study was to evaluate the diagnostic accuracies of KL-6 in lung cancer.

[Patients and Methods] A total of 147 patients with lung cancer and 77 patients with benign chest disease were included in this study. Serum KL-6 levels were measured using ECLIA method. The cut-off level of 500 U/ml was used for KL-6.

[Results] Serum KL-6 levels were elevated in 34 patients (22.4%) in lung cancer, and 2 patients (2.6%) in benign chest diseases. In 147 lung cancer patients, the average serum KL-6 levels were 298 ±119 U/ml in patients with T1 disease, 451 ±243 U/ml in T2 disease, 674 ±485 U/ml in T3 disease, and 557 ±437 U/ml in T4 disease. The significant correlation was observed in T-factor and KL-6 (p <0.0001). The average serum KL-6 levels were 366 ±241 U/ml in patients with N0 disease, 392 ±326 U/ml in N1 disease, 459 ±257 U/ml in N2 disease, and 499 ±228 U/ml in N3 disease. Serum KL-6 levels were not significantly correlated with nodal status. Serum KL-6 levels were also correlated with tumor size (r=0.324, p <0.0001), M-factor (p=0.017), and clinical stage (p <0.0001). The sensitivity, specificity, positive predictive value, negative predictive value, and accuracy were calculated as 22.4%, 97.4%, 94.3%, 39.7%, and 48.2%, respectively, using the cut-off level of 500 U/ml.

[Conclusion] The serum KL-6 levels have some potential to be used as a tumor marker of primary lung cancer.