SCLC

1467P CLINICAL SIGNIFICANCE OF CIRCULATING TUMOR CELLS IN PATIENTS WITH SMALL-CELL LUNG CANCER

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Aim: Identification of early diagnostic or prognostic biomarkers is of great clinical significance for lung cancer, particularly the small-cell lung cancer (SCLC). Circulating tumor cells (CTCs) are detached from primary tumor mass at an early stage, which might be suitable to predict the outcome of patients with cancer.

Methods: Blood samples were obtained from 42 patients with SCLC before and after the first cycle of chemotherapy. CTCs were enriched through negative immunomagnetic using anti-CD45 antibody and identified through immunocytochemistry using anti-pan-cytokeratin antibody. Associations of CTCs number with clinical factors and patients’ progression-free survival (PFS) were determined.

Results: CTCs were positive (≥2) in 76.19% of SCLC patients (32/42). The control group consisted of 10 patients with benign lung diseases and 10 healthy donors had no positive subject detected. The presence of CTCs was positively correlated with patients’ PS score, clinical staging, phase M, number of metastatic sites, NSE and LDH values (P<0.05). PFS was 6.055 and 10.670 months respectively for the patients with ≥2 CTCs/7.5mL in blood and <2 CTCs/7.5mL in blood before chemotherapy (HR=3.101; 95% CI, 4.865 to 7.244; P=0.008). PFS was 4.862 and 10.535 months respectively for the patients with ≥2 CTCs/7.5mL in blood and <2 CTCs/7.5mL in blood after one cycle of chemotherapy (HR=6.317; 95% CI, 8.938 to 12.133; P=0.000).

Conclusions: Both baseline CTCs number and its change after one cycle of chemotherapy are significantly prognostic factors of PFS for SCLC.

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