

Efficacy and safety for combination of DCs/CIKs with thoracic radiotherapy for patients with advanced NSCLC

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The combination of dendritic cells (DCs) with cytokine-induced killer cells (CIKs) can induce the anti-tumor immune response and radiotherapy may promote the activity. The purpose of this study is to explore the efficacy of DCs/CIKs combined with thoracic radiotherapy (TRT) for patients with advanced non-small-cell lung cancer (NSCLC). The eligibility criteria were as follows: at least 18 years of age; a life expectancy of more than 3 months; performance status (PS) 0-2; ≥ 2 cycles of previous chemotherapy and at least one measurable lesion. In control group, TRT alone was given at 2 Gy per fraction, 5 fractions per week to a total dose of 60-66 Gy. In treatment group, in addition to the TRT regimens mentioned above, patients received a weekly autologous DC injection for four successive weeks starting from the 6th fraction of irradiation, and CIK infusion for four continuous days from day 11. Finally, 82 patients with advanced NSCLC from 2012–2014 were enrolled, with 21 in treatment group and 61 in control group. There was no significant difference in the gender, age, clinical stage and the total dose of radiotherapy between the two groups ($P > 0.05$). The median progress-free survival (mPFS) in treatment group was longer than in control group (330 days vs 233 days, hazard ratio 0.51, 95% CI 0.27-1.0, $P < 0.05$), and the objective response rate (ORR) of treatment group (47.6%) was significantly higher compared with control group (24.6%, $P < 0.05$). There was no significant difference in disease control rate (DCR) and median overall survival (mOS) between the two groups ($P > 0.05$). The side effects in treatment group were mild and there were not any treatment-related deaths. In conclusion, DCs/CIKs combined TRT had higher response rate and significant improvement in PFS compared with TRT alone in advanced NSCLC.

Biography

Jian-Guo Sun received his PhD in oncology in 2004 from Third Military Medical University, China. He was a visiting scholar in the Department of Radiation Oncology, Stanford University. He has been a physician and an oncology researcher and published more than 20 articles in international journals. His current research focuses on the radio resistance and re-growth of lung cancer cells after radiation.