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Fuzi combined with radiotherapy confers significant antitumor effect via decreasing the proportion of regulatory T (Treg) cells

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Fuzi, a traditional Chinese medicine is widely used as an antitumor agent in China. However, its mechanism of antitumor is not clear by now. In the present study, the antitumor effect and mechanism of Fuzi combined with radiotherapy were examined in vivo on Lewis lung carcinoma in mice. Through the treatment of Fuzi combined with radiotherapy, we examined whether Fuzi has the effect of radiosensitization on Lewis lung cancer cells. We found that treatment of Fuzi combined with radiotherapy significantly inhibited the growth of Lewis lung cancer, which can prolong the survival time of mice. Furthermore, the efficacy of Fuzi in decreasing the proportion of the irradiation-induced Treg cells were regulated by some cytokines, such as interleukin (IL)-10 and transforming growth factor (TGF)-β. We also found that the antitumor mechanism probably depended on the decrease of the expression level of irradiation-induced programmed death ligand-1 (PD-L1) in local tumor cells. These data suggested that Fuzi can be used as an immunomodulatory drug in preventing irradiation-induced immunity disorder.

Biography

Tiankui Qiao has completed his MD from Hebei Medical University. He is the Director of Department of Oncology, Jinshan Hospital-Fudan University. His research interest is focused on clinical study of lung cancer and radiotherapy. He has published more than 30 papers in reputed journals.

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