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Immunotherapy of DC-CIK Cells Enhances the Efficacy of Chemotherapy for Solid Cancer: A Meta-analysis of RCTs in Chinese Patients

Keywords:
Solid carcinoma, Meta-analysis, Dendritic cells, Cytokine-induced killer cells, Immunotherapy

Research Summary

Immunotherapy of dendritic cell (DC) and cytokine-induced killer (CIK) cells have shown anti-cancer effects and potential to overcome chemotherapeutic resistance.

In this study, we meta-analyzed clinical RCTs to evaluate whether DC-CIK cell-based therapy improves the clinical efficacy of chemotherapy on solid cancer.

Overall survival (OS), disease free survival (DFS), objective response rate (ORR), disease control rate (DCR), and the levels of T-lymphocyte subtypes in peripheral blood were used to measure the outcome.

Innovation points

1、Twelve RCTs (including 826 patients) focusing on DC-CIK therapy were included and meta-analyzed. Characteristics of patients and immunotherapy were summarized in Table 1 and 2.

2、 Combination of DC-CIK and chemotherapy induced longer OS and DFS, as well as higher ORR and DCR, indicated in Figs. 3, 4, and 5.

Innovation points

3、 DC-CIK significantly up-regulated CD3+ and CD4+ T-lymphocytes and promote immune activity of cancer patients (Fig. 6).

4、 DC-CIK cells therapy exhibited differentiated effects in different cancer types. And Table 3 and 4 were generated to summarize the differences between cancers.

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