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PHA-CD3AK细胞的制备及其对恶性肿瘤的疗效 点此下载全文

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摘要：

目的： 探讨植物血凝素（PHA）、抗CD3单克隆抗体（anti-CD3McAb）和rhIL-2共同诱导的PHA-CD3AK(PHA-CD3McAb actinated killer cell)细胞的临床应用质量控制，及其对恶性肿瘤的疗效。 方法： 选取陕西省友谊医院肿瘤生物诊疗科 53例中晚期肿瘤患者(宫颈癌9例，肺癌6例，肾癌6例，非霍奇金淋巴瘤5例，肝癌5例，胃癌7例，食道癌5例，恶性黑素瘤5例，直肠癌5例)，分离患者外周血单个核细胞，加入PHA、anti-CD3McAb、rhIL-2体外诱导制备自体 PHA-CD3AK细胞。质量控制检测细胞数量和活细胞比例、细胞毒活性、内毒素和感染源，流式细胞术检测免疫表型。将检测合格的自体PHA-CD3AK细胞静脉回输至患者体内，每2 d 回输 1 次，每疗程6 次，共2个疗程，观察治疗效果和不良反应。 结果: 制备的 PHA-CD3AK细胞符合预期免疫活性细胞质控的各项要求。治疗后患者外周血CD3 +、CD4 +、CD8 + T 细胞和 CD16 +56 +细胞（NK 细胞）比例分别为（49.36 ± 9.21）%、（34.85 ± 4.35）%、（29.20± 5.12）%和（21.15 ± 6.50）%，较治疗前均显著升高（均 P<0.05）。大部分患者治疗后全身症状明显改善（43/53），其中完全缓解 6 例、部分缓解14 例、微效10 例、稳定14 例、进展9例，总有效率达56 6%，临床受益率达83.0%。所有患者治疗后相关化验指标均未出现异常变化，也未出现明显的全身毒性反应。 结论： PHA-CD3AK细胞制剂质量控制指标切实可行，其对恶性肿瘤的疗效确切，并能有效提高患者的免疫功能。

关键词：PHA-CD3AK细胞 恶性肿瘤 过继免疫治疗 质量控制

Preparation of PHA-CD3AK cells and their therapeutic effect against malignant tumor Download Fulltext

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Abstract:

Objective: To investigate the clinical quality control of PHA-CD3AK cells induced by PHA, anti-CD3 monoclonal antibody and rhIL-2, and their therapeutic effects against malignant tumors. Methods: Fifty-three patients with advanced malignant tumor were from Friendship Hospital of Shaanxi Province. Peripheral blood mononuclear cells (PBMC) were obtained and induced to differentiate into autologous PHA-CD3AK cells by PHA, anti-CD3mAb and rhIL-2. Quality control indices including quantity, viability, cytotoxicity, endotoxin contaminant and infection source of PHA-CD3AK cells were examined, and the immunophenotypes were studied by flow cytometry. The qualified autologous PHA-CD3AK cells were gathered and infused back to the tumor patients intravenously, once every 2 days; each episode included 6 times, with a total of 2 courses. Therapeutic effects and adverse reactions were observed, and the effective and clinical beneficial rates were calculated. Results: The prepared PHA-CD3AK cells met the quality standard of the expected immune activated cells. The ratios of CD3 +T, CD4 +T, CD8 +T and CD16 + CD56 + cells in the peripheral blood were (49.36±9.21)%, (34.85±4.35)%, (29.20±5.12)% and (21.15±6.50)% respectively after treatment with autologous PHA-CD3AK cells, which were significantly higher than those before treatment (all P<0.05). The general symptoms of most patients were obviously improved (43/53), with 6 cases reaching CR, 14 cases reaching PR, 10 cases reaching MR, 14 cases reaching SD, 9 cases reaching progression; the total effective rate was 56.6%, and the clinical beneficial rate was 83.0%. There were no abnormal changes of the related chemical indices or toxicity reaction. Conclusion: Our quality control method for prepared PHA-CD3AK cells is feasible, and they have definite therapeutic effects against malignant tumor and can efficiently improve the immune function of tumor patients.

Keywords:PHA-CD3McAb activated killer cell (PHA-CD3AK) malignant tumor adoptive immunotherapy quality control

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