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论文

红车轴草提取物对小鼠淋巴细胞活化与增殖及巨噬细胞分泌NO的影响

杨志;黄秀艳;曾耀英

暨南大学 组织移植与免疫实验中心， 广东 广州 510632

摘要：

探讨红车轴草提取物(RCE)在体外对小鼠T淋巴细胞和巨噬细胞的影响。MTT法检测RCE对细胞的毒性作用。荧光抗体染色结合流式细胞术检测RCE对T淋巴细胞在Con A的刺激下表达活化抗原CD69、CD25、CD71的影响。CFDA-SE标记技术结合流式细胞术分析RCE对T淋巴细胞在Con A诱导下增殖情况的影响。Griess法检测RCE对小鼠巨噬细胞在LPS刺激24 h后分泌NO的影响。RCE对小鼠有潜在的抗炎作用。RCE对小鼠淋巴细胞和巨噬细胞的细胞毒作用很小。不同质量浓度的RCE能够很好的抑制过量的炎症相关信号分子表达，如NO, CD69, CD25, CD71，且呈剂量依赖性。RCE能够抑制T淋巴细胞的增殖。数据显示RCE可能通过对小鼠淋巴细胞活化与增殖及巨噬细胞NO分泌的抑制展示其抗炎效应。

关键词： 红车轴草提取物;淋巴细胞;巨噬细胞;增殖;活化;一氧化氮

Effects of red clover extract on the activation and proliferation of mouse T lymphocytes and the NO secretion of mouse macrophages

YANG Zhi; HUANG Xiu-yan; ZENG Yao-ying

Abstract:

The study investigated the effects of red clover extract (RCE) on mouse T macrophages and lymphocytes *in vitro*. The cell toxic effect of RCE was estimated by MTT assay. Multiple-fluorescence staining plus flow cytometry were used to detect the effect of RCE on CD69/CD25/CD71 expression of mouse T lymphocytes stimulated by Con A; CFDA-SE staining plus flow cytometry were used to analyze the effect of RCE on proliferation of T lymphocytes activated by Con A; The effect of RCE on nitric oxide (NO) secretion of mouse macrophages stimulated by lipopolysaccharide (LPS) for 24 h was assayed by Griess reagent system. We found that RCE had potent anti-inflammatory effects on mice. RCE had little cell toxic effect on mouse lymphocytes and macrophages. RCE strongly inhibited the excessive production of inflammatory mediators (NO, CD69, CD25, CD71), in a dose-dependent manner, like cyclosporine A injection. RCE could inhibit proliferation of $CD3^+$ T lymphocytes. These data suggested that RCE might exhibit anti-inflammatory effect by inhibiting the activation and proliferation of mouse lymphocytes and the NO secretion of mouse macrophages.

Keywords: red clover extract;lymphocyte;macrophage;proliferation;activation;nitric oxide

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通讯作者: 曾耀英

作者简介:

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