

论著

木瓜苷对环磷酰胺增强的小鼠接触性超敏反应的影响

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摘要 目的 探讨胸腺在环磷酰胺 (Cy) 增强的小鼠接触性超敏反应 (CHS) 中的作用及木瓜苷 (GCS) 对胸腺T淋巴细胞亚型的影响。方法 采用了2, 4-二硝基氟苯 (DNFB) 诱导小鼠CHS模型及Cy诱导小鼠增强CHS模型, 检测Con A诱导的小鼠脾脏T淋巴细胞增殖、胸腺T淋巴细胞亚型和Con A诱导的胸腺T淋巴细胞培养上清中TGF- β_1 , IL-4和IL-2水平。结果 小鼠CHS模型中, Con A诱导的脾淋巴细胞增殖增强, CD4⁺CD8⁺双阳性胸腺T淋巴细胞比例增加, 胸腺细胞产生的T_H1和T_H3型细胞因子IL-2和TGF- β_1 水平增高而Th2型细胞因子IL-4水平降低。DNFB初次致敏前3 d腹腔注射Cy (250 mg/kg) 可以增强CHS反应。GCS (120和240 mg/kg) 连续灌胃12 d可以提高Cy增强的小鼠CHS胸腺T淋巴细胞中CD4⁺CD8⁻和CD4⁺CD8⁺细胞比例, 降低CD4⁺CD8⁺细胞比例; 并提高胸腺淋巴细胞培养上清中IL-4水平, 降低IL-2和TGF- β_1 水平。结论 GCS对Cy增强的小鼠CHS有明显抑制作用; 可有效调节小鼠胸腺CD4/CD8和T_H淋巴细胞亚群及细胞因子产生平衡。

关键词 木瓜苷 接触性超敏反应 CD4⁺-T淋巴细胞 CD8⁺-T淋巴细胞 白细胞介素-2 白细胞介素-4 转化生长因子 β

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Effects of *Chaenomeles speciosa* glucosides on cyclophosphamide potentiated contact hypersensitivity in mice

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Abstract

AIM To investigate the roles of thymus T lymphocytes subsets in contact hypersensitivity (CHS) and effects of glucosides of *Chaenomeles speciosa* (GCS) on this response. **METHODS** CHS model induced by 2,4-dinitro-I-dinitrofluorobenzene (DNFB) and cyclophosphamide (Cy) potentiated CHS model were used. GCS(60,120 and 240 mg/kg) were given intragastrically (ig) once daily for 12 consecutive days. Concanavalin A (Con A)-induced lymphocytes proliferation was observed by MTT assay. CD4/CD8 T lymphocytes subsets were measured by flow cytometry and the levels of Con A-induced cytokines from thymocytes were measured by enzyme-linked immunosorbent assay (ELISA). **RESULTS** Splenocyte proliferation stimulated by Con A was augmented and CD4⁺CD8⁺ T lymphocytes were increased in thymus of mice with CHS. The balance of CD4⁺ Th subsets was changed to favor T_H1 and T_H3 as shown by the increased interleukin-2 (IL-2) and transforming growth factor β_1 (TGF- β_1) production and the decreased interleukin-4 (IL-4) production. GCS, similar as the control drug actarit (4-acetylamino phenylacetic acid), could elevate the percentage of CD4⁺CD8⁻ T lymphocytes and CD4⁺CD8⁺ T lymphocytes, and reduce the percentage of CD4⁺CD8⁺ T cells in Cy-potentiated CHS mice. GCS inhibited the production of IL-2 and TGF- β_1 , and increased the IL-4 level in cultures of thymocytes from mice with Cy-potentiated CHS. **CONCLUSION** GCS inhibits Cy-potentiated mice CHS response and modulates the balance of CD4/CD8 or helper T cells subsets.

Key words glucosides *Chaenomeles speciosa* contact hypersensitivity CD4⁺-positive T lymphocytes CD8⁺-positive T lymphocytes interleukin-2 interleukin-4 transforming growth factor beta

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