

7-羰基-脱氢表雄酮对慢性轻度应激BALB/c小鼠免疫系统的影响

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摘要:

目的建立慢性轻度应激动物模型,观察7-羰基-脱氢表雄酮(7-oxo-DHEA)对该模型免疫系统功能的影响。方法通过对BALB/c小鼠连续4周施加7种应激原,建立慢性轻度应激动物模型。采用淋巴细胞增殖实验和NK细胞杀伤实验评价免疫功能的变化。结果4周慢性应激处理后,小鼠T淋巴细胞对Con A刺激增殖反应、NK细胞杀伤活性及血清中T₃和T₄水平明显下降。7-oxo-DHEA 15 mg·kg⁻¹能显著提高小鼠T淋巴细胞对Con A刺激增殖反应,并显著提高NK细胞杀伤活性及应激小鼠血清中T₃和T₄浓度。结论7-oxo-DHEA能显著改善慢性应激引起的免疫功能低下。

关键词: 7-羰基-脱氢表雄酮 慢性轻度应激 淋巴细胞增殖反应 NK细胞杀伤活性

Effects of 7-oxo-DHEA treatment on the immunoreactivity of BALB/c mice subjected to chronic mild stress

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Abstract:

Aim To determine whether 7-oxo-dehydroepiandrosterone (7-oxo-DHEA) can reverse the hyp immunity in BALB/c mice exposed to chronic mild stress. Methods A chronic mild stress animal model was established by subjecting BALB/c mice to a stressful regimen arranged in an unpredicted manner for 4 consecutive weeks. Immunological function alternations under chronic mild stress were assessed by lymphocytes proliferative response to mitogens and NK cell lysis activity test. Results The studies showed the correlation between the state of depression and abnormalities in the immune response, such as a decrease of T lymphocytes proliferative response to Con A and suppression of cytotoxic of NK cell. Meanwhile, significant decrease of T₃ and T₄ levels was also observed. When stressed mice were daily given 7-oxo-DHEA 15 mg·kg⁻¹, lymphocyte proliferative response and the NK cell activity were significantly enhanced and the decreased levels of T₃ and T₄ were restored in the stressed mice. Conclusion 7-oxo-DHEA can improve the depressive symptoms and hyp immunity of BALB/c mice induced by chronic mild stress as its parent DHEA.

Keywords: chronic mild stress lymphocyte proliferative response NK cell lysis activity 7-oxo-dehydroepiandrosterone

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