

咖啡酸对慢性应激大鼠的抗抑郁作用

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摘要 目的 探讨咖啡酸对慢性应激大鼠的抗抑郁作用。方法 采用各种慢性不可预见轻微刺激建立大鼠抑郁模型。21 d后, ig给予大鼠咖啡酸10, 30和50 mg·kg⁻¹, 连续21 d。通过旷场实验检测中央格停留时间、水平活动和垂直活动情况, 通过强迫游泳实验检测大鼠静止不动行为百分比(PI); 检测海马超氧化物歧化酶(SOD)活性与丙二醛(MDA)含量。结果与正常对照组相比, 模型组大鼠在旷场实验中央格停留时间增长, 水平活动和垂直活动减少, 强迫游泳静止不动状态增加, SOD活性显著降低, MDA含量显著升高(P<0.01)。与模型组相比, 咖啡酸10~50 mg·kg⁻¹组能够显著缩短停留时间(P<0.05)、增加垂直活动(P<0.01), 但对水平活动无明显影响。模型组PI为(79.69±15.84)%, 咖啡酸10~50 mg·kg⁻¹组PI显著降低, 分别为(16.00±2.11)%, (10.33±2.92)%和(7.33±2.63)%。与正常对照组相比, 模型组SOD酶活性显著降低, MDA含量显著增加

(P<0.01), 与模型组相比, 咖啡酸10~50 mg·kg⁻¹能够显著增加SOD酶活性, 分别为模型组的1.50, 2.46和2.59倍(r=0.915, P<0.01); MDA含量显著降低, 分别为模型组的18.64%, 11.37%和6.35%(P<0.01), 且呈剂量依赖性(r=0.982, P<0.01)。咖啡酸与舍曲林5 mg·kg⁻¹的作用相似。结论 咖啡酸对慢性应激大鼠有一定的抗抑郁作用。

关键词 [咖啡酸](#) [慢性轻度不可预见应激](#) [旷场实验](#) [强迫游泳](#) [超氧化物歧化酶](#) [丙二醛](#)

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Effect of caffeic acid on depressive rats induced by chronic mild unpredictable stress

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Abstract

OBJECTIVE To observe effect of caffeic acid on depressive behavior in rats induced by chronic mild unpredictable stress. **METHODS** Depressive model in rats was established by chronic mild unpredictable stress depression for 21 d. After that, caffeic acid 10, 30 and 50 mg·kg⁻¹ were ig given in rats, for 21 d. Open field test was used to evaluate the latent time, and the condition of rearing and crossing. Percentage of immobility (PI) was confirmed by forced swimming test in rats. Superoxide dismutase (SOD) activity and malondialdehyde(MDA) content in hippocampus were determined to preliminary the antiexpressive mechanism of caffeic acid. **RESULTS** Compared with normal control group, latent time obviously increased, crossing time and rearing time in rats significantly decreased in model group, and the duration of immobility in rats significantly increased. Compared with model group, caffeic acid 10-50 mg·kg⁻¹ obviously declined the latent time (P<0.05), and lifted the crossing time (P<0.01), however it could not change rearing time. PI significantly decreased in caffeic acid 10, 30 and 50 mg·kg⁻¹ groups, they were (16.0±

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2.1)%, $(10.3 \pm 2.9)\%$ and $(7.3 \pm 2.6)\%$, respectively. Compared with normal control group, SOD activity increased and MDA content significantly decreased in model group ($P < 0.01$). Compared with model group, caffeic acid obviously increased SOD (1.50, 2.46 and 2.59 times to model group ($r = 0.915$, $P < 0.01$))