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简报

β淀粉样蛋白对衰老模型大鼠学习记忆及大脑皮层内脂褐素含量的影响

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摘要 为探讨β淀粉样蛋白（βAP，于d 28双侧海马内各注射4 μg）对*D*-半乳糖（*D*-Gal，ip，50 mg·kg^{-1}·d^{-1}连续42 d）致衰老大鼠学习记忆行为的影响，检测了大鼠学习记忆行为，包括开场行为，Y-迷宫分辨学习和一次性被动回避反应，并用荧光光度计测定大脑皮层内脂褐素含量. 结果表明*D*-Gal和βAP使大鼠在新异环境中自发活动和探究行为减少，学习记忆能力减退；同时大脑皮层内脂褐素含量增加. βAP与*D*-Gal联用使上述作用进一步增强，说明βAP与*D*-Gal有一定协同作用.

关键词 淀粉样β蛋白； 学习； 记忆； 衰老； 脂褐素； 行为,动物

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Effect of β amyloid protein on learning-memory and cerebral cortex lipofuscin content in the aging model of rats

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Abstract

To study effect of β-amyloid protein(βAP, 4 μg in 1 μL, injected into each side of hippocampus at d 28) on learning and memory in the aging rats induced by *D*-galactose(*D*-Gal, ip, 50 mg·kg^{-1}·d^{-1}, for 42 d). The behaviors of rats were measured by using open field, Y- maze and one- trial passive avoidance response, and the lipofuscin content in cerebral cortex were measured by spectrofluoro-photometer. The results showed that *D*-Gal and βAP alone significantly decreased the spontaneous activities and responses to novel environment in the open field, and remarkably attenuated the abilities of learning-memory, increased the lipofuscin content in cerebral cortex. The combination of *D*-Gal and βAP enhanced the above-mentioned effects, which suggests that they are cooperative in impairing learning and memory.

Key words amyloid beta protein learning memory aging lipofuscin behavior animal

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