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病理性疼痛对老年雄性大鼠海马细胞凋亡和胆碱乙酰转移酶的影响 [点此下载全文](#)

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摘要:

目的:研究病理性疼痛对老年雄性大鼠海马细胞凋亡和胆碱乙酰转移酶(CHAT)含量的影响。方法:60只老年雄性SD大鼠450—500g,随机分成3组,A组:单纯麻醉组;B组:假手术组;C组:模型组,结扎左侧坐骨神经各组再按术前1天、术后第1、7、14天4个时间点,分为4个亚组,每组5只。各组在热痛敏试验检测后,麻醉、灌注、开颅取脑,分别进行流式细胞仪检测、HE染色和CHAT免疫组化分析。结果:①术后第1天C组结扎侧热痛敏实验所致后肢回缩时间数值较基础值明显缩短,第7、14天热痛阈继续呈下降趋势,与A组相比,差异显著($P<0.01$)。②C组CA3区锥体细胞数目明显减少($P<0.01$)。③C组较A组和B组出现了更多的细胞凋亡($P<0.01$)。④C组CHAT阳性细胞数目比A组和B组明显减少($P<0.01$)。结论:病理性疼痛可以造成老年雄性大鼠热痛阈的明显下降和海马CA3区锥体细胞明显凋亡以及CHAT阳性细胞数目减少。

关键词: [疼痛](#) [海马](#) [细胞凋亡](#) [胆碱乙酰转移酶](#)

The impacts of pathological pain on the aged male rat hippocampus apoptosis and choline acetyltransferase [Download Fulltext](#)

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Fund Project:

Abstract:

Objective:To study the impacts of pathological pain on apoptosis of hippocampus and content of choline acetyltransferase (CHAT) in old male rats. Method:Sixty aged male SD rats 450—500g, were divided into 3 groups, A group: anaesthesiaed group;B group: sham-operated group;C group: model group with left sciatic nerves ligated. Each group was divided into 4 sub-groups according to the time points: 1d before operation and the 1st d, 7th d, 14th d after operation, n=5. All groups were anaesthesiaed, perfused, craniotomized for brain resecting. After heat-pain test, FCM, HE staining and CHAT immunization were detected. Result:①In group C the paw withdrawal latency(PWL) in heat-pain shortend apparently,and the heat-pain threshold continued on a downward trend at the 7th d and 14th d. There was significant difference compared with group A ($P<0.01$).②In group C the number of pyramidal cells of CA3 region reduced significantly ($P<0.01$).③In group C, there were more apoptosis than that in group A and group B ($P<0.01$).④The number of CHAT positive cells in group C was less significantly than that in group A and group B ($P<0.01$). Conclusion: The pathological pain could cause apparent decline of heat-pain threshold, significant apoptosis of the cells of CA3 region in hippocampus and reduction of CHAT positive cells in rats.

Keywords:[pain](#) [hippocampus](#) [apoptosis](#) [choline acetyltransferase](#)

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