

# 左、右归丸对肾虚质大鼠学习记忆 及海马区 CREB 蛋白表达的影响<sup>\*</sup>

徐鹏冲 牛丹青 张景明<sup>\*\*</sup>

(陕西中医药大学, 陕西 咸阳 712046)

**摘要:**目的 观察左归丸和右归丸对肾虚质大鼠学习记忆和海马环磷酸腺苷反应元件结合蛋白(CREB)表达的影响,进一步明确左归丸和右归丸治疗肾虚质学习记忆减退的作用靶点。方法 采用“猫吓鼠”的方法,建造肾虚质大鼠模型,继续对子代鼠进行恐吓的同时用左归丸和右归丸进行干预治疗。用 Morris 水迷宫对大鼠的学习记忆能力进行测试,同时用酶联免疫吸附法测定海马区 CREB 的蛋白表达水平。结果 ①各组子代鼠学习记忆情况:定位航行试验中,与空白组比较,肾虚质模型组逃避潜伏期、总路程均明显延长( $P < 0.05$ );与肾虚质模型组比较,左、右归丸组逃避潜伏期、总路程均明显缩短( $P < 0.05$ );②酶联免疫吸附测定 CREB 浓度:与空白组比较,肾虚质模型组 CREB 蛋白含量显著降低( $P < 0.05$ );与肾虚质模型组比较,左、右归丸组 CREB 蛋白含量明显升高( $P < 0.05$ )。结论 左、右归丸可能是通过调控海马区 CREB 蛋白表达来改善肾虚质大鼠学习记忆能力。

**关键词:** 肾虚质;学习记忆;CREB;左归丸;右归丸

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## Effects of Zuogui and Yougui Pills on Learning and Memory and CREB Protein Expression in Hippocampus of Rats with Kidney Deficiency

Xu Pengchong Niu Danqing Zhang Jingming

(Shaanxi University of Chinese Medicine, Xianyang China, 712046)

**Abstract Objective** To observe the effects of Zuogui Pill and Yougui Pill on learning and memory and the expression of cyclic adenosine phosphate response element binding protein (CREB) in hippocampus of rats with kidney deficiency, and to further clarify the targets of Zuogui Pill and Yougui Pill in the treatment of learning and memory impairment of kidney deficiency. **Method** The rat model of kidney deficiency was constructed by the method of “cat scaring mouse”, the intimidation of the offspring rats was continued, and Zuogui pill and Yougui pill were used for intervention. The learning and memory ability of rats was tested by Morris water maze, and the protein expression level of CREB in hippocampus was determined by enzyme-linked immunosorbent assay. **Result** (1) Learning and memory of offspring rats in each group: in the navigation test, compared with blank group, the escape latency and total distance of kidney deficiency model group were significantly prolonged ( $P < 0.05$ ); compared with kidney

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\*\* 通讯作者:张景明,教授,硕士生导师。E-mail:zhangjingmingtzh@163.com