

方药研究

“嗅三针”疗法对血管性痴呆大鼠学习记忆功能及 Nrf2 表达的影响^{*}

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摘要:目的 研究“嗅三针”疗法对 VD 模型大鼠的干预作用及其与海马 Nrf2 蛋白含量的关系。方法 选取 45 只成年 SD 雄性大鼠, 体重为 200 ~ 220g。随机分为 3 组, 即正常组、模型组 (VD 模型组)、嗅三针组, 每组 15 只。制作模型, 运用嗅三针进行干预治疗, 然后, 运用水迷宫实验测试大鼠学习记忆能力, 并采用 western blot 法、ELISA 等法测定海马 Nrf2 蛋白含量。结果 水迷宫试验结果显示关于平均游泳路程和平均逃避潜伏期数据统计, 模型组大鼠逃脱潜伏期增加 (定位航行实验)、目标平台象限占用平均时间减少, 与空白组大鼠比较具有显著性差异 ($P < 0.01$); 经“嗅三针”干预后, 大鼠逃脱潜伏期减少、目标平台象限占用平均时间增加, 与模型组比较具有显著性差异 ($P < 0.05$); 与空白组大鼠比较, 模型组大鼠 Nrf2 表达增加, 具有显著性差异 ($P < 0.01$); “嗅三针”组与模型组比较, Nrf2 表达增加, 与模型组比较具有显著性差异 ($P < 0.05$)。结论 “嗅三针”疗法可明显改善 VD 大鼠的学习记忆能力, 该疗效机理与大脑海马 Nrf2 的激活密切相关。

关键词: 嗅三针; 血管性痴呆; Nrf2

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Effects of “Three Olfactory Acupoints” Therapy on Learning and Memory Function and Nrf2 Expression in Vascular Dementia Rats

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Abstract: Objective To study the intervention effect of “three olfactory acupoints” therapy on VD model rats and its relationship with hippocampal Nrf2 protein content. **Methods** Forty-five adult male SD rats were selected, weighing 200 ~ 220 g. They were randomly divided into three groups, namely the normal group, the model group (VD model group), and “three olfactory acupoints” group, with 15 in each. The model was made, and three olfactory acupoints were used for intervention treatment. Then, the water maze experiment was used to test the learning and memory ability of the rats, and the western blot method and ELISA were used to determine the hippocampal Nrf2 protein content. **Results** The results of the water maze test showed that, as for the average swimming distance and average escape latency, the escape latency of the model group was increased (positioning navigation experiment), the average time of the target platform quadrant occupied decreased, which was significantly different from the blank group ($P < 0.01$); after “three olfactory acupoints” intervention, the escape latency of the rats was reduced, and the average time spent on the target platform quadrant was

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