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论著

大黄素甲醚对大鼠脑缺血再灌注损伤的拮抗作用

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摘要 目的：探讨大黄素甲醚对脑缺血再灌注后IL-1β含量和ICAM-1及caspase-3表达的影响。 方法： 91只SD大鼠随机分为正常组（normal），假手术组（sham），模型组（model），大黄素甲醚大剂量（PHD）及小剂量(PLD)组。采用线栓法复制大鼠右侧大脑中动脉脑缺血再灌注模型，用放射免疫法测定病变侧脑组织IL-1β的含量，用免疫组织化学方法测定ICAM-1和caspase-3表达的变化，并进行组织病理学观察。 结果：Model组再灌注6 h病变侧IL-1β含量明显升高且达高峰，再灌注24 h病变侧ICAM-1、caspase-3表达明显升高，中性粒细胞附壁浸润明显；大黄素甲醚PHD组再灌注12 h、24 h病变侧IL-1β、ICAM-1和caspase-3表达明显低于model组相应时段(P<0.05或P<0.01)，中性粒细胞附壁浸润较少。 结论： 大黄素甲醚可降低脑缺血再灌注后IL-1β、ICAM-1和caspase-3水平，减轻脑缺血再灌注损伤。

关键词 大黄素甲醚； 脑缺血； 再灌注损伤； 白细胞介素1； 胞间粘附分子1； 半胱氨酸天冬氨酸蛋白酶3

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Protective effects of physcion against cerebral injury induced by ischemia-reperfusion in rats

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Abstract

<FONT face=Verdana>AIM: To explore the effect of physcion (P) on the level of IL-1β and expression of ICAM-1 and caspase-3 during cerebral ischemia-reperfusion injury. METHODS: The 91 healthy adult SD rats were selected, and were randomly divided into normal group, sham-operated group, cerebral ischemia-reperfusion group (model), low-dose physcion (PLD) and high-dose physcion (PHD) treatment group. The level of IL-1β was detected by radioimmunoassay. The expression of ICAM-1 and caspase-3 was detected by immunohistochemistry. The changes of tissue pathology were also investigated. RESULTS: The level of IL-1β reached the peak at 6 h after ischemia-reperfusion (IR). The protein expression of ICAM-1 and caspase-3 reached the peak at 24 h after IR. The level of IL-1β and the protein expression of ICAM-1 and caspase-3 in PHD group decreased obviously compared with those in model group (P<0.05 or P<0.01), infiltration and adhesiveness of neutrophils were less serious at the same time. CONCLUSION: Physcion decreases the level of IL-1β and the protein expression of ICAM-1 and caspase-3 to protect brain tissue from cerebral ischemia-reperfusion injury.</FONT>

Key words Physcion Brain ischemia Reperfusion injury Interleukin-1 Intercellular adhesion molecule-1 Caspase 3

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