

论著

冬虫夏草制剂对自发性高血压大鼠肾组织 ICAM-1和VCAM-1表达的影响

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摘要:

目的: 观察自发性高血压大鼠(SHR)肾组织中细胞间黏附分子-1(ICAM-1)和血管细胞黏附分子-1(VCAM-1)表达及冬虫夏草制剂对其影响。方法: 清洁级雄性SHR 22只、WKY大鼠6只(W组), SHR随机分为非干预组(S组)、冬虫夏草制剂组(C组)、福辛普利组(F组)、冬虫夏草制剂加福辛普利组(FC组), 后3组以冬虫夏草制剂4 g/(kg·d)和/或福辛普利10 mg/(kg·d)灌胃, S组及W组以等量清水灌胃, 测血压, 8周末测尿蛋白、血肌酐, 取肾组织做HE, Masson染色, 免疫组织化学及RT-PCR方法检测ICAM-1, VCAM-1蛋白及mRNA表达情况。结果: 与WKY大鼠比较, SHR尿蛋白排泄量增高, 肾组织ICAM-1, VCAM-1蛋白及mRNA表达增强。与S组比较, 福辛普利使大鼠血压下降, 而冬虫夏草制剂无明显降压作用。但C, F, FC组均有尿蛋白排泄量、血肌酐水平下降; 肾组织ICAM-1, VCAM-1蛋白及mRNA表达下调。结论: 高血压造成肾脏损害时可出现肾组织ICAM-1和VCAM-1的异常表达, 冬虫夏草制剂可有效改善二者的异常表达, 具有良好的肾保护作用。

关键词: 高血压肾脏损害 细胞间黏附分子-1 血管细胞黏附分子-1 冬虫夏草

Effect of Cordceps Sinensis on the expression of ICAM-1 and VCAM-1 in the kidney of spontaneously hypertensive rats

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Abstract:

Objective To observe the effect of Cordceps Sinensis (CS) on the expression of intercellular adhesion molecule-1 (ICAM-1) and vascular cell adhesion molecule-1 (VCAM-1) in the kidney of spontaneously hypertensive rats(SHR), and to investigate the mechanism of CS. Methods Male SHR (23 week old) were randomly divided into 4 groups: a group without any treatment (Group S), a group treated with Cordceps sinensis at 4 g/(kg·d)(Group C), a group treated with foscipril at 10 mg/(kg·d) (Group F), and a group received daily intragastric administration of CS at 4 g/(kg·d) and foscipril at 10 mg/(kg·d) (Group CF). At the same time, 6 male WKY rats were used as normals controls. At the end of 8 weeks, all rats were sacrificed. Serum creatinine(Scr), 24 h urinary protein count, and the expression of ICAM-1 and VCAM-1 were examined by immunohistochemical technique and RT-PCR. Results Compared with the WKY rats, blood pressure, 24 h urinary protein count, Scr, and the expression of ICAM-1 and VCAM-1 in the kidney of SHR significantly increased (P<0.05). Compared with Group S, blood pressure decreased after treatment by foscipril (P<0.05). Compared with Group S, the levels of Scr, 24 h urinary protein count, and glomerular lesion were significantly reduced in the CS and/or foscipril treatment group. The expression of ICAM-1 and VCAM-1 was significantly decreased in these groups (P<0.05). Conclusion CS may play a role in the protection and anti-fibrosis in the process of renal injury in SHR through reducing the expression of ICAM-1 and VCAM-1.

Keywords: hypertensive nephropathy; intercellular adhesion molecule-1; vascular cell adhesion molecule-1; Cordceps Sinensis

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