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17B-雌二醇对实验性自身免疫性脑脊髓炎大鼠脊髓Rho激酶表达的影响(PDF)

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Title: Nuclear estrogen receptor-mediated Rho-kinase expression inhibition by 17B-estradiol in the spinal cord of experimental autoimmune encephalomyelitis rats

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关键词: 实验性自身免疫性脑脊髓炎; 17B-雌二醇; Rho激酶; 雌激素核受体

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摘要: 目的 探讨17B-雌二醇对实验性自身免疫性脑脊髓炎(experimental autoimmune encephalomyelitis, EAE)大鼠中枢神经系统Rho激酶表达的影响及相关机制。 方法 75只雌性Wistar大鼠分为正常组、模型组、雌激素组、DMSO对照组和雌激素+雌激素核受体抑制剂ICI组。雌激素组每日皮下注射17B-雌二醇20 μg/(kg·d),连续10 d。雌激素+ICI组于17B-雌二醇注射前给予雌激素核受体抑制剂ICI 182780 5 mg/(kg·d),比较各组大鼠神经功能评分; HE染色观察病理学改变;免疫组织化学和Western blot观察Rho激酶表达的变化。 结果 与对照组和模型组分别比较,雌激素组发病潜伏期延长,神经功能评分降低; HE染色示雌激素组炎性细胞浸润减少; 免疫组化检测结果显示, 雌激素组Rho激酶阳性细胞数(8.36±1.57)明显低于模型组[(17.55±1.70), $P<0.01$]; Western blot检测结果显示, 雌激素组蛋白表达相对值(0.833±0.022)显著低于模型组[(1.013±0.060), $P<0.05$]; 雌激素+ICI组Rho激酶阳性细胞数(18.90±2.39)和蛋白表达(1.141±0.046)显著高于雌激素组($P<0.05$)。 结论 17B-雌二醇能抑制EAE大鼠Rho激酶的表达,这种抑制作用是通过经典的雌激素核受体通路实现的。

Abstract: Objective To explore the effect of 17B-estradiol on Rho-kinase expression in the central nervous system (CNS) of experimental autoimmune encephalomyelitis (EAE) rats and related mechanism. Methods Seventy-five female Wistar rats were randomly divided into a normal group, an EAE group, a DMSO control group, an E2 group, and an E2+ICI group. Except for the rats of the normal group, the rats of the other 4 groups were first given ovariectomy to construct EAE rat models. The rats of the E2 group were treated with once daily s.c. injection of 17B-estradiol [20 μg/(kg·d)] for 10 d, and the rats of the E2+ICI group were treated with a nuclear estrogen receptor antagonist ICI 182780 [5 mg/(kg·d)] before 17B-estradiol injection. Neurological function scores were recorded and compared among the groups. HE staining was applied for pathological evaluation. The expression of Rho-kinase in each group was examined by immunohistochemistry and Western blotting. Results The treatment with 17B-estradiol resulted in a delay in EAE onset ($P<0.05$) as well as a lower neurological function score ($P<0.05$) in the E2 group as compared with those in the EAE group and the DMSO control group. The infiltration of inflammatory cells was alleviated in the E2 group showed by H-E staining. Immunohistochemistry result showed that the number of Rho-kinase-positive cells in the E2 group (8.36 ± 1.57) was significantly lower than that in the EAE group (17.55 ± 1.70 , $P<0.01$). Western blotting results showed the expression of Rho-kinase protein in the E2 group (0.833 ± 0.022) was significantly lower than that in the EAE group (1.013 ± 0.06 , $P<0.05$). The number of Rho-kinase-positive cells (18.90 ± 2.39) and Rho-kinase protein expression (1.141 ± 0.046) in the E2+ICI group were significantly higher than those in the E2 group ($P<0.05$). Conclusion 17B-estradiol can inhibit the expression of Rho-kinase in EAE rats by classical nuclear estrogen receptor pathway.

参考文献/REFERENCES

冯金洲, 胡晓, 王恬竹, 等. 17B-雌二醇对实验性自身免疫性脑脊髓炎大鼠脊髓Rho激酶表达的影响[J]. 第三军医大学学报, 2012, 34(6): 534-537.

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