[1]吴锐,殷章圣,李荣亨.不同剂量的糖皮质激素对复杂区域疼痛综合征1型大鼠骨折模型的治疗作用[J].第三军医大学学报,2012,34(05):423-426.

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不同剂量的糖皮质激素对复杂区域疼痛综合征1型大鼠骨折模型的治疗作用(PDF)

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Title: Different-dosed glucocorticoid in treatment of tibial fracture rat model of complex regional pain syndrome type 1

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关键词: 复杂区域性疼痛综合征1型; P物质; 糖皮质激素; 巨噬细胞游走抑制因子; 肿瘤坏死因子

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摘要: 目的 探讨不同剂量的激素治疗复杂区域疼痛综合征1（complex regional pain syndrome type 1，CRPS1）大鼠的疗效及其对肿瘤坏死因子-α（TNF-α）、血清P物质（SP）、巨噬细胞游走抑制因子（microphage migration inhibitory factor，MIF）表达的影响。 方法 30只成年雄性SD大鼠，随机数字表法分3组，每组10只：治疗1、2组、对照组在进行骨折制动造模结束后分别以甲强龙4、20 mg/（kg·d）和生理盐水对应治疗，腹腔注射，连续1周。治疗前后检测动物疼痛行为，治疗结束后8 h、1、3周检测血清SP、MIF及TNF-α水平。 结果 两治疗组在不同剂量激素治疗后，肢体肿胀、疼痛不同程度缓解。治疗2组血清SP、MIF、TNF-α均明显低于对照组（$P<0.01$，$P<0.05$），在各个观察点疼痛阈值均高于治疗1组及对照组（$P<0.05$）。 结论 大剂量的糖皮质激素对大鼠骨折CRPS1模型疗效优于小剂量，且对炎症因子有显著且持续抑制作用，小剂量糖皮质激素可部分缓解肢体肿胀及疼痛，对部分细胞因子表达有即时抑制作用。不同剂量激素在CRPS1型的疗效差异与其能否抑制MIF有关。

Abstract: Objective To determine the efficacy and possible mechanism of glucocorticoid at different doses in complex regional pain syndrome type 1 (CRPS1) rat model and its effect on serum P substance (SP), macrophage migration inhibitory factor (MIF) and tumor necrosis factor alpha (TNF-α). Methods Thirty adult health SD rats were randomly divided into control group, treatment-1 group and treatment-2 group with 10 rats in each group. Methylprednisolone (MP) was abdominally administered in treatment-1 group [4 mg/(kg·d)] and treatment-2 group [20 mg/(kg·d)]. Pain behaviors were observed after 1-week-treatment. Serum SP, MIF and TNF-α were measured by ELISA at 8 h, 1 and 3 weeks after 1-week-treatment. Results Hindpaw edema and pain was better after 1-week-treatment in 2 groups. T-2 group had higher pain threshold and lower serum levels of SP, MIF and TNF-α when compared to T-1 group and control group ($P<0.01$, 0.05). Conclusion It is suggested high-dose glucocorticoid is more effective in releasing edema and pain in CRPS1 rat model than low-dose glucocorticoid. Glucocorticoid might be through instantly suppressing some inflammatory factors. The difference of different doses of glucocorticoid might be due to whether suppresses MIF.

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备注/Memo: -