

论文

褪黑素提高吗啡依赖小鼠的免疫功能并抑制 NO的过量释放

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摘要:

目的 探讨褪黑素(MT)对吗啡依赖小鼠免疫功能的影响及其与一氧化氮(NO)的关系。方法 sc吗啡建立小鼠身体依赖模型; 纳洛酮催瘾; 称量免疫器官重量; Con A刺激的脾细胞淋巴增殖反应; 碳粒廓清实验检测小鼠血中单核巨噬细胞的吞噬功能; 小鼠腹腔巨噬细胞诱导NO含量的测定。结果 MT可对抗吗啡引起的免疫抑制, 包括阻止吗啡对淋巴细胞增殖反应的抑制; 明显提高吗啡依赖小鼠巨噬细胞的吞噬指数; 抑制吗啡引起的腹腔巨噬细胞过量释放NO。MT对巨噬细胞的吞噬功能的增强作用可被纳洛酮阻断。结论 MT可提高吗啡依赖小鼠的免疫功能并抑制腹腔巨噬细胞中NO的过量释放。

关键词: 褪黑素 吗啡依赖 免疫功能 一氧化氮

THE EFFECT OF MELATONIN ON ENHANCING IMMUNE FUNCTION AND INHIBITING THE ABILITY OF NO OVER-RELEASE IN MORPHINE DEPENDENT MICE

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Abstract:

AIM To observe the effects and mechanism of melatonin (MT) on the immune function of morphine dependent mice. METHODS A physical dependent mice model was established by repeated subcutaneous injection of morphine. The intensity of morphine withdrawal syndrome was evaluated according to the weight of immune organs, the proliferation reaction of stimulated splenic lymphocytes by Con A, the phago-index of blood primed macrophages and the content of NO induced in the peritoneal macrophage (pMφ). RESULTS MT reversed the inhibitory effect of morphine on the proliferation ability of splenic lymphocytes and enhanced the phagocytosis of macrophages of morphine dependent mice obviously and prevented the over-release of NO from pMφ. The enhancing effects of MT on the phagocytosis can be prevented by naloxon. CONCLUSION MT can significantly enhance the immune function of morphine dependent mice and inhibit NO excessive release from pMφ.

Keywords: morphine dependence immune function nitric oxide melatonin

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