

论著

三氧化二砷对狼疮小鼠存活率和自身免疫反应的影响

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摘要 目的 探讨三氧化二砷 (ATO) 在治疗系统性红斑狼疮中的应用价值并探讨其作用机制。方法 ① BXS_B狼疮小鼠随机分为ATO治疗组和对照组, 每组17只。ATO治疗组隔日ip ATO 0.4 mg·kg⁻¹至d 105, 实验持续至d 210结束, 观察两组小鼠的存活率, 采用ELISA法检测小鼠血清IgG和抗ds-DNA抗体水平。② 另外20只BXS_B狼疮小鼠, 同上分组处理, 至d 90处死取脾和肾组织, 提取总RNA, 用RT-PCR方法检测脾和肾组织中干扰素γ (IFN-γ) mRNA的表达。结果 至d 210, ATO治疗组小鼠死亡8只, 对照组死亡13只。至d 90和d 105, 治疗组小鼠血清抗ds-DNA抗体 (A_{450 nm}) 分别为0.335±0.011和0.223±0.017, 对照组分别为0.688±0.016和0.683±0.014。至d 90 ATO治疗组小鼠脾和肾组织IFN-γ mRNA表达较对照组亦明显下降。至d 105, ATO治疗组血清IgG水平较对照组明显下降, 分别为(4.9±1.3)和(6.9±1.0) g·L⁻¹。结论 ATO可提高BXS_B狼疮小鼠的存活率, 降低血清IgG和抗ds-DNA抗体水平, 抑制脾和肾组织IFN-γ mRNA的表达。

关键词 [三氧化二砷](#) [红斑狼疮](#), [系统性](#) [存活率](#) [自身免疫](#)

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Effects of arsenic trioxide on survival rate and autoimmune responses of lupus mice

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Abstract

AIM To evaluate the value of arsenic trioxide (ATO) in the treatment of systemic lupus erythematosus and to investigate its mechanism. **METHODS** ① Thirty four BXS_B lupus mice were averagely and randomly divided into ATO treated group and control group. The mice of ATO treated group were given (ip) ATO 0.4 mg·kg⁻¹ every other day until d 105 and the observation was ended on d 210. The survival rate of mice was recorded, and the levels of serum IgG and anti-dsDNA antibody were measured with enzyme-linked immunosorbent assay. ② Other 20 BXS_B lupus mice were also divided into 2 groups and treated as above and sacrificed on d 90. The spleen and kidneys of each mouse were removed and total RNA was extracted. The levels of interferon-γ (IFN-γ) mRNA in renal and spleen tissues were measured by using reverse transcription polymerase chain reaction. **RESULTS** Up to d 210, 8 mice died in ATO treated group and 13 died in control group. On d 90 and d 105, the average levels of serum anti-dsDNA antibody (A_{450 nm}) were (0.335±0.011) and (0.223±0.017) in ATO treated group, and (0.688±0.016) and (0.683±0.014) in control group. On d 90, the expressions of IFN-γ mRNA in spleen and renal tissues of ATO treated group were significantly lower than that of control group. On d 105, the serum level of IgG was much lower in ATO treated group than that in control group, which were (4.9±1.3) and (6.9±1.0)g·L⁻¹, respectively. **CONCLUSION** ATO elevates the survival rate, lowers the serum levels of IgG and anti-dsDNA antibody, and depresses the expression of IFN-γ mRNA in spleen and kidney tissues of BXS_B mice.

Key words [arsenic trioxide](#) [lupus erythematosus](#) [systemic](#) [survival rate](#) [autoimmunity](#)

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