

论著

## 蒿甲醚对曼氏血吸虫的作用:剂量与效应的关系和虫的形态学和组织病理学的变化

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摘要

目的 应用感染曼氏血吸虫(利比亚株)的小鼠观察蒿甲醚单剂量与效应的关系,虫体肝移及蒿甲醚所引起的虫的形态学和组织病理学变化。方法 感染21d童虫的小鼠一次口服蒿甲醚12.5mg/kg至600mg/kg不同剂量,治后28d剖检观察各组虫数。感染46d或70d成虫的小鼠一次口服蒿甲醚400mg/kg后8~14d,观察虫体肝移及其形态和组织病理学变化。结果 蒿甲醚对21d童虫的最低有效剂量为200mg/kg,减虫率为81%。用蒿甲醚治疗后8h成虫开始肝移,3~7d全部肝移,14d有31%的虫返回肠系膜静脉。成虫虫体萎缩,咽部扩大,肠管膨胀及其色素减少。雌虫局部体表受损,白细胞附着,卵巢及卵黄腺变性退化,以及雄虫睾丸萎缩等。在肝内的虫体被嗜酸粒细胞为主的炎细胞包围和浸润。结论 蒿甲醚对小鼠曼氏血吸虫21d童虫的最低有效剂量为200mg/kg,可引起曼氏血吸虫成虫萎缩、退化或死亡。在肝内受损的虫体主要是被嗜酸粒细胞包围和侵袭所致。

关键词 [蒿甲醚](#) [曼氏血吸虫](#) [剂量效应关系](#), [药物](#) [病理学](#)

分类号

## Effect of Artemether on *Schistosoma mansoni*: Dose-Efficacy Relationship, and Changes in Worm Morphology and Histopathology

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Abstract

Objective To investigate the effects of artemether on *Schistosoma mansoni* harboured in mice, with particular consideration on single dose-efficacy relationship, hepatic shift and artemether-induced alterations in worm morphology and histopathology. Methods Groups of mice, infected with 21d old *S. mansoni*, were treated with artemether at single oral doses of 12.5mg/kg to 600mg/kg. Worm burden reduction was assessed 28d post-treatment. The hepatic shift was investigated in mice infected with 46d old *S. mansoni* and treated with artemether at a single oral dose of 400 mg/kg within a period of 14d post-treatment. Morphological and histopathological observations were made in adult worms in mice, subject to single oral dose of artemether at 400mg/kg. Results The minimum effective dose of oral artemether against juvenile worms in mice was 200 mg/kg, resulting in a worm burden reduction of 81%. The hepatic shift commenced 8 h post-treatment, and all worms shifted to the liver 3-7d post-treatment. Fourteen days post-treatment, 31% of the worms returned to the mesenteric veins. Treatment with artemether resulted in decreased worm body size, expansion of the pharynx and dilation of the gut with marked reduction in pigment. Focal tegumental damage was observed among female worms with adherence of host leukocytes and degeneration of ovary and vitelline glands, as well as atrophy of testis in male worms. Artemether-damaged worms were surrounded and infiltrated by eosinophils. Conclusion The minimum effective dosage of artemether against 21d old *S. mansoni* in mice is 200mg/kg. Artemether also exhibits effect against adult schistosomes, including shrinkage and degeneration, and can lead to worm death. The predominant inflammatory cell surrounded and infiltrated into the

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artemether-damaged worm is eosinophil.

Key words [Artemether](#) [Schistosoma mansoni](#) [Dose-Response Relationship](#) [Drug Pathology](#)

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