

论著

## 巴西日圆线虫诱导小鼠T辅助细胞的变化对伯氏疟原虫感染的影响

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摘要

[目的] 观察预感染巴西日圆线虫后, 小鼠抵御伯氏疟原虫攻击感染的能力, 并着重探讨T辅助细胞亚型在感染过程中的变化以及这些变化对宿主免疫力和预后的影响。[方法] 皮下注射巴西日圆线虫感染C57BL/6小鼠, 建立线虫预感染模型, 于3wk后腹腔注射伯氏疟原虫ANKA株攻击感染小鼠。观察每天原虫血症变化情况, 并于疟原虫感染后0、3和9d取脾, 提取RNA, 用RT-PCR扩增法定性观察细胞因子IFN-γ和IL-4的变化。[结果] 与对照组相比, 实验组感染疟原虫后, 原虫血症的峰值出现时间明显延长, 小鼠对疟原虫感染的耐受程度以及小鼠生存时间显著提高。实验组Th2型细胞合成IL-4的量在疟原虫感染0d时明显高于对照组; 而在3与9d时两组均异常升高。Th1型细胞合成IFN-γ的量在疟原虫感染后3d时实验组高于对照组, 但在9d时实验组IFN-γ有所下降。[结论] 预感染巴西日圆线虫的小鼠具有较高的抗感染能力。但在攻击感染疟原虫后Th2型细胞被提前激活而抑制了Th1型细胞的正常功能, 最终仍导致小鼠死亡。

关键词 [T辅助细胞](#) [免疫](#) [伯氏疟原虫](#) [巴西日圆线虫](#)

分类号

## EFFECT OF NIPPOSTRONGYLUS BRASILIENSIS INDUCED ALTERATIONS IN T HELPER CELL SUBSETS ON PLASMODIUM BERGHEI INFECTION IN MICE

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Abstract

[Objective] To observe the anti *P.berghei* ability of C57BL/6 mice after infected with *Nippostrongylus brasiliensis* alterations in T helper cell subsets in the course of *Plasmodium* infection, and the effect of the alteration on host's prognoses. [Methods] C57BL/6 mice were infected with *Nippostrongylus brasiliensis* subcutaneously, 3 wk later, the mice were injected with *Plasmodium berghei* intraperitoneally. The parasitemia was monitored daily. On days 0,3 and 9, RNA from the spleens of infected mice was prepared for RT-PCR to analyse the changes of IFN-γ and IL-4 mRNA during the infection course. [Results] Compared with control group, the peak reaching time of parasitemia in the experiment group was delayed, and the bearing capacity of mice to malaria infection and the surviving time increased obviously. The IL-4 level in the experiment group was higher than that in the control group on day 0 of *P.berghei* infection, but all raised abnormally in both groups at the early stage of the infection; while IFN-γ level in the experiment group was higher than that in the control group on day 3 after infection, and then began to reduce to some extent on day 9 of the infection in the experiment group. [Conclusion] T helper cell subsets play an important role in antimalarial immunoregulation in mice.

Key words [T helper cell](#) [immunity](#) [Plasmodium berghei](#) [Nippostrongylus brasiliensis](#)

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