

论著

## TNF- $\alpha$ 和ICAM-1在脑型疟发病中的作用

车里穆<sup>1</sup>,牛宇欣<sup>2</sup>,李慧珠<sup>1</sup>,陈小宁<sup>3</sup>

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摘要

[目的]研究粘附分子 TNF- $\alpha$ 、ICAM-1与脑型疟 (cerebral malaria,CM)的关系,并通过体内注射外源性 TNF- $\alpha$ 来观察 ICAM-1的表达情况及其对 CM发生的影响。[方法]通过建立 CM小鼠模型,酶联免疫吸附实验 (ELISA)检测感染小鼠血清 TNF- $\alpha$ 浓度。免疫组织化学 SP法检测感染小鼠脑微血管的 ICAM-1表达,结果用真彩色图象分析仪半定量分析。[结果]发生 CM小鼠的血清 TNF- $\alpha$ 明显高于其它小鼠,只有发生 CM的小鼠脑微血管有 ICAM-1表达,体内注射 r TNF- $\alpha$ 能促进 CM的发生,并显著增加脑微血管的 ICAM-1的表达。[结论]大量的 TNF- $\alpha$ 在 CM的发病中可能有直接致病作用,但主要可能通过调节脑微血管的 ICAM-1表达发挥作用

关键词 [脑型疟疾](#) [TNF- \$\alpha\$](#)  [ICAM-1](#) [伯氏疟原虫](#)

分类号

## ROLE OF TNF- $\alpha$ AND ICAM-1 IN PATHOGENESIS OF CEREBRAL MALARIA

CHE Li mu<sup>1</sup>,NIU Yu xin<sup>2</sup>,LI Hui zhu<sup>1</sup>,CHEN Xiao ning<sup>3</sup>

1 Department of Parasitology; Capital University of Medical Sciences; Beijing 100054; 2 Department of Genetics; Capital University of Medical Sciences; Beijing 100054; 3 Department of Parasitology, Chengde Medical College, Chengde 067000

### Abstract

[Objective] To investigate the role of TNF  $\alpha$  and ICAM 1 in the pathogenesis of cerebral malaria. [Methods] Immunohistochemical method and ELISA were employed to examine the expression of ICAM 1 on the brain microvessel endothelium and to detect the production of serum TNF  $\alpha$  in P berghei ANKA strain infected CBA/J mice. [Results] Serum TNF  $\alpha$  levels of mice were apparently higher and the ICAM 1 expression was more evident in P berghei ANKA infected CBA/J mice than in control groups. rTNF  $\alpha$  ip injection could enhance the development of CM and the expression of ICAM 1 on brain endothelial cells(EC). [Conclusion] Excessive production of TNF  $\alpha$  may mediate the expression of ICAM 1 on brain EC and hence cause the development of CM.

**Key words** [Cerebral malaria\(CM\)](#) [ICAM-1](#) [TNF- \$\alpha\$](#)  [Plasmodium berghei](#).

DOI:

通讯作者

作者个人主页 车里穆<sup>1</sup>;牛宇欣<sup>2</sup>;李慧珠<sup>1</sup>;陈小宁<sup>3</sup>

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