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论著

青蒿琥酯阻断恶性疟传播的研究

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摘要

目的 观察青蒿琥酯（ATS）对恶性疟原虫配子体的作用。 方法 31例外周血含恶性疟原虫无性体和配子体的志愿者分为ATS组（15例）、奎宁（QN）组（10例）和安慰剂组（6例）。ATS组于第0、6和24 h口服青蒿琥酯片各200 mg，第3～6天100 mg/d；QN组口服硫酸奎宁片，每天3次，500 mg/次，连服7 d；安慰剂组口服复合维生素B片，每天3次，2片/次，连服7 d。每例患者每天检查外周血恶性疟原虫配子体密度，并于服药后第1、7、14、21和28天抽取静脉血人工感染大劣按蚊，检测其感染恶性疟原虫子孢子情况。 结果 服药后ATS组恶性疟原虫配子体相对密度迅速下降，第7、14和21天分别为（12.5±3.3）%、（1.2±0.4）%和（0.3± 0.1）%，转阴时间为（22.0±1.4） d；QN组第7、14和21天恶性疟原虫配子体相对密度分别为（173.9±47.0）%、（112.5±45.4）%和（32.5±17.8）%，转阴时间为（32.5±2.1）d，两组间转阴时间差异有统计学意义（t=4.731，P＜0.01）；安慰剂组住院后恶性疟原虫配子体相对密度有所下降。患者血液人工感染大劣按蚊试验显示，服药第14天，ATS组、QN组和安慰剂组的子孢子阳性率分别为0、35.0%和48.7%。子孢子相对感染强度, ATS组第7和14天分别为18.2%和0；QN组第7、14和21天分别为142.0%、98.6%和20.3%。安慰剂组第1、7、14、21和28天子孢子感染强度较稳定, 均为100%(6/6)。 结论 口服ATS 6 d总量1 000 mg对阻断恶性疟传播有良好的作用。

关键词 青蒿琥酯 恶性疟原虫 大劣按蚊

分类号

Artesunate in Interrupting the Transmission of *Plasmodium falciparum*

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Abstract

Objective To observe the effect of artesunate（ATS） on the infectivity of *Plasmodium falciparum* gametocytes（PFG）. Methods 31 volunteers with falciparum malaria and gametocytemia were randomly divided into 3 groups：artesunate (ATS) group (15 cases)， quinine (QN) group (10 cases) and placebo group (6 cases). Each case in ATS group received 6-day course of oral artesunate (200 mg at 0，6 and 24 hours then 100 mg daily for 4 days). Cases in QN group each received 21-dose course of quinine sulfate (500 mg/time) over seven days. Cases in placebo group took 2 tablets of vitamin B composites，three times per day for seven days. Peripheral PFG were counted daily in all cases until the clearance of PFG. Mosquitoes (*Anopheles dirus*)were fed with venous blood of patients on the 1st，7th，14th，21st and 28th day，respectively. Results All cases in placebo group were PFG positive at the whole course by blood smear examinations. The PFG relative density in ATS group were（12.5±3.3）%，（1.2± 0.4）%，（0.3± 0.1）% on 7th，14th，21st day respectively，and the mean PFG clearance time was（22.0±1.4）d. The PFG relative density in QN group were（173.9±47.0）%，（112.5±45.4）%，（32.5±17.8）% at 7th，14th，21st day respectively，and the mean clearance time of PFG was （32.5±2.1）d （t=4.731，P＜0.01). PFG remained positive on the 28th day in placebo group. The infectivity test to mosquitoes showed on 14th day the positive rate in ATS group，QN group and placebo group were 0，35.0% and 48.7% respectively. In ATS group，the sporozoite rate of anopheline mosquitoes were 14.8% and 0 at 7th，14th day，while in QN group，142.0%，98.6% and 20.3% at 7th，14th，21st day respectively. In placebo group，the infection rate of sporozoites remained stable. Conclusion Oral administration of

artesunate with a total dosage of 1 000 mg in 6 days inhibits the infectivity of PFG.
Key words Artesunate *Plasmodium falciparum* *Anopheles dirus*

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