

论著

## 云南省恶性疟原虫裂殖子表面蛋白1基因分型及测序

诸欣平,周蕾,刘强,高欣

首都医科大学寄生虫学教研室 北京100054

收稿日期 修回日期 网络版发布日期 接受日期

摘要

目的: 确定云南省恶性疟原虫裂殖子表面蛋白1 (MSP1) 基因分型和探讨 MSP1 基因多态性的遗传及地理特征。方法: 采用巢式 PCR法和引物标记周期反应测定法, 对云南疫区恶性疟原虫群体 MSP1 基因分型, 并对代表株进行基因序列分析。结果: 30 例云南恶性疟患者, 检出38 个基因型虫株, 其中 MAD20 型是优势虫株, K1 次之, RO33 最少, 并存在不同基因株混合感染现象。扩增片段序列分析表明, 云南疫区的 MAD20 型、K1 型和 RO33 型均分别与国际上典型的 MSP1、MAD20、K1 和 RO33 等位基因代表株具有高度的同源性。结论: 以 MSP1 为基因标记物的基因分型法, 有助于掌握流行区疟原虫种群的基因特点、分布及流行特征。

关键词 [恶性疟原虫](#) [裂殖子表面蛋白1](#) [基因分型](#) [DNA序列分析](#) [等位基因](#)

分类号

## GENOTYPE AND SEQUENCE ANALYSIS OF MEROZOITE SURFACE PROTEIN 1 OF PLASMODIUM FALCIPARUM ISOLATES IN YUNNAN PROVINCE

ZHU Xinping,ZHOU Lei,LIU Qiang,GAO Xin

Department of Parasitology; Capital University of Medical Sciences; Beijing 100054

Abstract

AIM: To identify the genotype of merozoite surface protein 1 of Plasmodium falciparum in Yunnan Province and explore the polymorphism of MSP1 genes in geographical characteristics and genetics. METHODS: Nested polymerase chain reaction was applied to genotyping of P. falciparum isolated in Yunnan Province. Some of parasite alleles were sequenced by dye primer cycle sequencing. RESULTS: In 30 P. falciparum infections, 38 different alleles were found. Of them, the dominant allele was a variant of MAD20, while was K1 less and the RO33 was few. In addition, incidences of mixed allele infections were observed. Sequence analysis showed that DNA sequences of MAD20, K1 and RO33 alleles from Yunnan were highly homologous with those of international standard strains, respectively. CONCLUSION: Composition and sequence characteristics of P.falciparum parasite population in the endemic area can be detected by genotyping with MSP1 as genetic marker, which would be useful for the prevention and treatment of malaria.

Key words [Plasmodium falciparum](#) [merozoite surface protein 1](#) [genotyping](#) [DNA sequencing](#) [allele](#)

DOI:

通讯作者

作者个人主页

诸欣平;周蕾;刘强;高欣

### 扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(197KB\)](#)
- ▶ [\[HTML全文\]\(OKB\)](#)
- ▶ [参考文献\[PDF\]](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“恶性疟原虫”的 相关文章](#)
- ▶ 本文作者相关文章

- [诸欣平](#)
- [周蕾](#)
- [刘强](#)
- [高欣](#)