

论著

斯氏按蚊血淋巴酚氧化酶与约氏疟原虫卵囊黑化的关系

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摘要

[目的]探讨酚氧化酶(phenoloxidase,PO)与疟原虫卵囊黑化的关系。[方法]以斯氏按蚊/约氏疟原虫为模型,对4组斯氏按蚊(不吸血组、吸正常血组、吸感染血组和硝喹组)血淋巴进行聚丙烯酰胺凝胶电泳(PAGE)和凝胶图像分析,检测单酚氧化酶(monophenoloxidase,MPO)和二酚氧化酶(diphenoloxidase,DPO)活性。[结果]吸正常血组和不吸血组蚊血淋巴中MPO及o DPO活性无明显差异;与吸正常血组或不吸血组相比,感染组MPO及o DPO活性无明显变化,但用药组d1 0则显著增加,d1 5显著降低。[结论]斯氏按蚊血淋巴中PO活性变化与约氏疟原虫卵囊黑化在时间上一致。

关键词 [约氏疟原虫](#) [斯氏按蚊](#) [血淋巴](#) [酚氧化酶](#) [黑化](#)

分类号

RELATIONSHIP BETWEEN HEMOLYMPH PHENOL OXIDASE AND MELANIZATION OF OOCYSTS OF PLASMODIUM YOELII IN ANOPHELES STEPHENSI

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Abstract

[Objective] To explore the relationship between the hemolymph phenol oxidase and melanization of oocysts. [Methods] Anopheles stephensi Plasmodium yoelii system was used to determine the activity of monophenol oxidase (MPO) and o diphenol oxidase (o DPO) in the hemolymph collected from 4 groups of mosquitoes by polyacrylamide gel electrophoresis (PAGE) followed by density scanning. The 4 groups of mosquitoes were: non blood fed (N), normal blood fed (B), infected blood fed (I) and nitroquine administrated (D), respectively. [Results] No significant difference was found in the activities of MPO and o DPO between groups N and B. The activities of MPO and o DPO were not obviously modified in group I, but were significantly increased on day 10 and decreased on day 15 after blood feeding in the group D as compared with those in the groups N and B. [Conclusion] The alteration in the mosquito hemolymph PO activity coincided at each time point with the melanization of Plasmodium yoelii oocysts.

Key words [Plasmodium yoelii](#) [Anopheles stephensi](#) [hemolymph](#) [phenol oxidase](#) [melanization.](#)

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