

论著

ELISA检测云南按蚊环孢子蛋白的评价

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摘要

目的 采用酶联免疫吸附测定(ELISA)技术检测疟疾媒介按蚊环孢子蛋白(CSP),评价ELISA用于云南疟疾媒介按蚊传疟效能调查的可行性。方法 现场捕获疟疾媒介按蚊经产蚊,每只蚊镜检3叶唾腺孢子感染率,ELISA检测另3叶唾腺CSP;用含间日疟原虫配子体的患者血人工喂饲微小按蚊,11d后同法镜检唾腺孢子感染率及ELISA检测唾腺CSP。在种植场捕获8种按蚊(微小按蚊、中华按蚊、多斑按蚊、迷糊按蚊、可赫按蚊、带足按蚊、菲律宾按蚊和须喙按蚊)各龄成蚊,ELISA检测唾腺CSP。结果 ①现场捕获经产蚊1010只,镜检唾腺孢子阳性7只,阳性率为0.69%;ELISA检测唾腺CSP阳性8只,阳性率为0.79%;其中6只蚊两项检测均为阳性,阳性率为0.59%。两法比较,差异无显著性意义(P>0.05)。②人工感染36只微小按蚊,镜检唾腺孢子阳性27只,阳性率为75.0%;ELISA检测唾腺CSP阳性29只,阳性率为80.6%;其中有26只蚊两项检测(Pv2 10CSP)均阳性,阳性率为72.2%。两法比较,差异无显著性意义(P>0.05)。③种植场捕获8种按蚊各龄成蚊4675只,ELISA检测唾腺CSP阳性11只,阳性率为0.24%;其中Pv210阳性9只,Pf2A10阳性2只;微小按蚊、中华按蚊和多斑按蚊ELISA检测阳性

关键词 [按蚊属](#) [疟原虫属](#) [子孢子](#) [环孢子蛋白](#) [酶联免疫吸附测定](#)

分类号

Evaluation of the Enzyme-linked Immunosorbant Assay in Detecting Circumsporozoite Protein of Anopheline Vectors in Yunnan

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Abstract

Objective To detect circumsporozoite protein (CSP) in anopheline vectors from south Yunnan and to evaluate ELISA in the detection. Methods Salivary glands of the anopheline mosquitoes were taken for finding sporozoites by microscopy and part of the glands was used for detecting CSP by ELISA. An. minimus was experimentally infected by blood from vivax malaria patient (with Plasmodium vivax) and examined for sporozoites and CSP. Eight species of anopheline mosquitoes were caught in the field and examined. Monoclonal antibodies to P.falciparum (Pf2A10) and P.vivax (Pv210, Pv247) were used in ELISA for detecting CSP. Results Sporozoites were found in the salivary glands of 27 out of 36 An. minimus experimentally infected (75.0%), 29 were ELISA CSP positives (80.6%), and 26 of the 27 mosquitoes showed Pv210 CSP positive. Among 1010 parous anopheline mosquitoes from the field, 7 were found sporozoite positive (0.69%), 8 were ELISA CSP positive (0.79%), and 6 of the 7 mosquitoes showed CSP positive. Of 4 675 wild mosquitoes in 8 anopheline species with different ages, 11 were found CSP positive (0.24%) including An.minimus, An.sinensis and An.maculatus with a positive rate of 0.20%, 0.24% and 0.39% respectively.Among the 11 mosquitoes, 9 were Pv210 positive and 2 were Pf2A10 positive. Conclusion CSP detection by ELISA is a useful method to monitor the malaria transmission capacity of anopheline vectors.

Key words [Anopheles](#) [Plasmodium](#) [Sporozoite](#) [Circumsporozoite protein](#) [ELISA](#)

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