

Samples of human sera collected from nine counties in south-western part of Yunnan province were examined for HI antibodies to 11 arboviral antigens. The viruses used in this experiment included 3 alphaviruses (MAY, VEE and CHIK) and 8 flaviviruses (JE, MVE, KUN, DEN3, DEN 4, KFD, LGT and POW).

275 samples were found positive for HI antibodies to alphaviruses (36.2%) and 189 of them (68.7%) reacted with MAY virus, 61 (22.2%) with CHIK. The GMT of HI titers for VEE, MAY and Chik were 164.4, 94.5 and 66.7, respectively.

588 samples of sera (77.4%) were found positive for HI antibodies to flaviviruses. The positive HI antibody rates were as follows: JE, 27.9%; DEN, 36.6%; KFD, 22.2%; MVE, 22.1%; KUN, 18.7%; POW, 8.8% and LGT, 7.9%, respectively. Its average GMT was 356, and the antibody titers of 403 samples of sera were higher than 1/640.

Cross reactions among viruses, especially

flaviviruses, were usually found by HI test, and superinfections were present.

In addition to the existence of JE and DEN viruses the results clearly showed that many kinds of arboviruses might exist in Yunnan Province.

**Key words** Arbovirus HI antibody  
Cross reaction Superinfection

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## 山东农村小学生弓形体感染流行病学研究

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1985年12月~1986年9月, 对邹县、滕县、阳信县的4所农村小学, 采集了643名小学生血标本, 以IHA检测弓形体抗体, 并进行流行病学调查。检测结果, 4所学校小学生感染率分别为2.17%、2.74%、3.97%及5.00%, 平均感染率为3.73%±0.75%。不同年龄、性别、民族(汉、回)感染率差别均不显著。

单因素分析表明, 养猫与弓形体感染有很强的联系( $\chi^2_{MH}=30.71, P<0.001, RR=7.67, RR$ 的95%可信限为3.76; 15.65); 养狗与弓形体感染之间也有统计学联系( $\chi^2_{MH}=5.20, P<0.05, RR=2.63, RR$ 的95%可信限为1.14; 6.04)。

分层分析结果: 1. 按养猫与否分层: 养猫组(层)中, 养狗者感染率为13.51%, 不养狗者为12.20%

RR=1.11; 不养猫组中, 养狗者感染率为1.94%, 不养狗者为1.65%, RR=1.18; 表明养狗与弓形体感染之间没有联系, 单因素分析显示的养狗与弓形体感染有联系是由于养猫的混杂作用所致。2. 按养狗与否分层: 在养狗组(层)中, 养猫者感染率为13.51%, 不养猫者为1.94%,  $\chi^2_{MH}=7.38, P<0.01, RR=6.96, RR$ 的95%可信限为1.72, 28.14; 不养狗组, 养猫者感染率为12.20%, 不养猫者为1.65%,  $\chi^2_{MH}=12.65, P<0.001, RR=7.39, RR$ 的95%可信限为2.46, 22.20; 这进一步确证养猫与弓形体感染之间有很强的联系, 可以认为接触猫是小学生感染弓形体的主要受染方式。