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论著

SIVmac239毒株经静脉及直肠感染中国恒河猴的比较

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摘要 摘要：目的 研究猴免疫缺陷病毒SIVmac239毒株经静脉及直肠途径感染中国恒河猴后的生物学特性和症状表现, 并比较由感染途径不同导致的差异, 为该模型系统的应用提供依据。方法 以SIVmac239毒株经静脉感染19只中国恒河猴, 经直肠感染6只中国恒河猴, 观察至感染后232或168 d, 比较其抗猴免疫缺陷病毒（SIV）特异性抗体滴度、CD4＋ T细胞数量、血浆病毒载量、淋巴结病理改变以及临床表现的变化。结果 所有猴均出现SIV抗体阳转。在静脉感染猴, 感染后10 d检测到SIV特异的IgM, 而直肠感染猴始终未能检测到。在感染后168 d, 静脉感染猴的SIV特异性IgG的平均水平较直肠感染猴高10倍。在观察期内, 直肠感染组的CD4＋T细胞数下降不如静脉感染组显著。所有猴的血浆SIV载量均在感染后10～14 d达到高峰（107拷贝/ml左右）, 约2个月后降至平台期（103～106拷贝/ml）。2只静脉感染猴及1只直肠感染猴在感染后150～210 d死于猴免疫缺陷综合征, 呈快速进展型改变。结论 SIVmac239毒株静脉及直肠感染接种中国恒河猴, 均可建立慢性的SIV感染, 其特征与人感染人类免疫缺陷病毒后的改变相似, 均可以作为良好的研究获得性免疫缺陷综合征（AIDS）的动物模型, 尤其有助于预防性或治疗性AIDS疫苗的研究。

关键词 猴免疫缺陷病毒 SIVmac239 中国恒河猴

分类号

Comparison of Intravenous and Intrarectal SIVmac239 Infections in Rhesus M*onkey*s of Chinese Origin

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Abstract ABSTRACT:Objective To investigate the biological and clinical features of Chinese rhesus m*onkey*s after intravenous (IV) and intrarectal (IR) challenge with SIVmac239 in rhesus m*onkey*s of Chinese origin, and compare the differences between the routes of infection. Methods Rhesus m*onkey*s of Chinese origin were inoculated with SIVmac239 either by IV (n=19) or IR (n=6) routes. Simian immunodeficiency virus （SIV）-specific antibody titer, CD4+T cell counting, plasma SIV load, lymph node pathology, and clinical manifestations were compared between these two groups 232 or 168 days after challenging. Results All SIVmac239-inoculated animals became seropositive for SIV-specific antibodies. SIV-specific IgM was detected in IV groups as from day 10 but was not detected in IR for all the time points. Although SIV-specific IgG was detected as from day 30 in both groups, the IgG titers were ten-fold higher in IV group than in IR group after day 168. CD4+T-cell counting decreased progressively in IV group but remained stable in IR group over time. Plasma SIV RNA loads peaked in all animals between day 10 and day 14 (107copies/ml), then declined to “set-point” (103～106copies/ml) about 2 months later. Most inoculated animals manifested lymphadenopathy. Two animals in IV group and one in IR group died of simian AIDS between day 150 and day 210, as evidenced by the autopsies showing the depletion of lymph tissues, Pneumocystis carinii pneumonia and other opportunity infections. Conclusion IV or IR inoculation of SIVmac239 in Chinese rhesus m*onkey*s will result in chronic SIV infection with a similar clinical feature of natural HIV infection, which provides an excellent experimental animal model for AIDS.

Key words simian immunodeficiency virus SIVmac239 rhesus monkey of Chinese origin

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