# Comparative studies of type 1 and 2 herpes simplex virus infection of cultured normal keratinocytes

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摘要

## Abstract

AIMS--To investigate the differences in biological properties, multiplication patterns, and cytopathic effects between type 1 and type 2 herpes simplex virus (HSV) through the replication of HSV in cultured normal human keratinocytes. METHODS--Keratinocytes were obtained from surgical specimens of normal gingiva, cervix, trunk skin, and newborn foreskin. They were cultured in serum free, chemically defined, culture medium and infected with a pool of HSV collected from clinical specimens. RESULTS--The reproductive patterns of HSV type 1 (HSV-1) and HSV type 2 (HSV-2) differed from each other regardless of the anatomical source of the cultured cells. This was made evident by the dissimilarity of their growth curves and cytopathic effects. The growth curve of HSV-2 showed a more or less continuously rising titre, whereas HSV-1 titres varied substantially at different time intervals. The cytopathic effects induced by HSV-1 infection took 24 more incubation hours than those induced by HSV-2 infection to manifest. During the early stages, the cytopathic changes of the two viruses looked different. However, all cultured cells, whether cultured with HSV-1 or HSV-2, eventually became small and globular in shape. The infective titres of both HSV-1 and HSV-2 were higher in infected cultured cervix than in infected cultured normal gingiva. CONCLUSIONS--These data suggest that each serotype of HSV has its own unique replication pattern in human keratinocytes regardless of the cell origin.