Abstract

Objective: To explore the possibility of diagnosing OHL by means of Papanicolaou (PAP) stain and polymerase chain reaction (PCR) technology for detection of Epstein-Barr virus (EBV).

Methods: One hundred and twelve HIV-positive patients from three special hospitals were enrolled in the study, 29 without OHL and 83 with clinical OHL. Fifty HIV-negative patients, from Pecking University School and Hospital of Stomatolgy, with no lesion on the lateral of tongue were enrolled as the control. Tongue scrapes were obtained for PAP stain and PCR analysis. The data were analyzed with the software SPSS13.0, chi-square test.

Results: 90.9% PAP-stained cytological smears demonstrated the characteristic nuclear changes, including condensation and margination of the nuclear chromatin (nuclear beading), Cowdry type A inclusion and ground-glass nuclei, which is significantly higher than that of the two control groups (p<0.001). 83.6% samples detected by PCR were positive for EBV DNA. The PCR technology and the PAP stain were of no significant differences in detecting the sign of EBV, according to the paired sample chi-square test. Combining the PCR technology with the PAP stain, the EBV was found in 96% subjects. The biopsy specimens from two OHL subjects and the scrape samples of the same two patients were detected by the PCR technology and the PAP stain and both were positive for EBV.
Conclusions: Both PAP stain and PCR technology in the analysis of exfoliative cytological specimens are of high sensitivity for detection of EBV and can be used for the definitive diagnosis of OHL, together or solo.