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Expression and significance of soluble gp120 in plasma and tissues of HIV-infected women with cervical intraepithelial neoplasia

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To investigate the expression and significance of soluble gp120 (sgp120) in plasma and biopsy tissue of women infected with human immunodeficiency virus (HIV) and combined with cervical intraepithelial neoplasia.

Methods: The pathological sections of cervical biopsy from 90 women with confirmed HIV infection were selected as the study objects. The patients without cervical intraepithelial neoplasia were taken as the control group, and the rest were taken as the observation group. The sgp120 content and positive expression rate in plasma and tissues of all subjects were detected by ELISA and immunohistochemical staining, and the correlation between sgp120 and the intensity of cervical intraepithelial neoplasia was evaluated by Pearson correlation analysis. The predictive value of sgp120 in cervical lesion intensity was analyzed by the subject work characteristic curve (ROC).

Results: Pathological biopsy results showed that 19 patients had no cervical intraepithelial neoplasia, and 71 patients had cervical intraepithelial neoplasia of different grades, including 34 patients with CIN1, 23 patients with CIN2, and 14 patients with CIN3. The expression of sgp120 in plasma and tissue increased gradually in control group, CIN1 grade, CIN2 grade and CIN3 grade ($P<0.05$). Moreover, there were statistically significant differences in the expression of sgp120 between low-grade cervical intraepithelial neoplasia (CIN1 group) and high-grade cervical intraepithelial neoplasia (CIN2+ CIN3 group) ($P<0.05$), but no statistically significant differences between CIN2 group and CIN3 group ($P>0.05$). Pearson correlation analysis showed that the positive expression intensity of sgp120 and the content of sgp120 in plasma gradually increased with the increase of cervical intraepithelial neoplasia, showing a linear correlation ($r=0.678$, $P<0.05$; $r=0.593$, $P<0.05$). ROC curve analysis showed that the AUC of sgp120 plasma content and tissue positivity in predicting cervical intraepithelial neoplasia in HIV patients were 0.638 and 0.728, respectively. The AUC of the two levels combined was 0.812, which was higher than the individual prediction level ($P<0.05$).

Conclusion: The plasma content and tissue positivity of sgp120 are related to the grade of cervical intraepithelial neoplasia in HIV-infected women. The combined detection has certain predictive value for cervical intraepithelial neoplasia in late-stage HIV-infected women.

Biography

Lanqin Luo, female, born in 1974.5.4, bachelor's degree, mainly engaged in AIDS mother-to-child blocking work, has more than 10 years of rich clinical experience.