Value of HPV-DNA subtype detection combined with liquid based cytology in cervical cancer screening

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To study the value of HPV-DNA detection combined with liquid-based cytology (LCT) for cervical cancer screening. Methods: A total of 2,458 cervical cancer cases were selected. They underwent PCR-reverse dot blot hybridization, and LCT test. With cervical biopsy and histopathological examination as the gold standard, the sensitivity, specificity, accuracy, correct diagnosis index, positive predictive value and negative predictive value were observed and compared among two methods respectively and the combined application. Results: Pathological examination showed significant difference in positive rate of HPV infection among different CIN groups and normal group ($P<0.05$), and significant difference in positive rate among CIN groups with different positive rate of LCT and normal group ($P<0.05$). Methodological comparison revealed sensitivity of LCT was higher than that of HPV-DNA detection, but the specificity of LCT was lower than HPV-DNA detection. The sensitivity, specificity of combination detection was 96.1%, 98.6%, respectively. Conclusions: Detection of HPV-DNA combined with LCT can improve sensitivity and specificity of cervical cancer screening. It is valuable in early screening of cervical cancer.

[KEY WORDS] Cervical cancer, Human papilloma virus, PCR-reverse dot blot hybridization method, Liquid based cytology