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HPV DNA TESTING (HYBRID CAPTURE) FOR FIAGNOSTIC TRIAGE OF MINOR-GRADE CYTOLOGICAL ABNORMALITIES

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Objective: Our purpose was to evaluate the clinical value of HPV DNA testing by use of a hybrid capture technique for predicting which patients with minor abnormal Papanicolaou smears (ASCUS/AGUS/low-grade SIL) are most likely to have cervical intraepithelial neoplasia.
Methods: A total of 148 women referred with minor abnormal PAP smears concurrently received hybrid capture testing for 15 HPV types, repeat PAP smears and colposcopically directed biopsies.
Results: There was a highly correlation between a positive HPV test and the finding of high grade CIN (CIN II/CIN III). The sensitivity of hybrid capture for high grade CIN was 90% (28/31), whereas the corresponding value for the repeat PAP smear (ASCUS or SIL) was 58% (18/31) only. The sensitivity of coupling hybrid capture with the repeat PAP did not increase much, 93% (29/31). In 50 women with ASCUS/AGUS on referred smear, hybrid capture testing identified all high grade CIN (3/3). For the 98 patients with low-grade SIL, the HPV DNA testing was successful in identifying 25 of the 28 with high grade CIN.
Conclusion: HPV DNA testing by hybrid capture have a good sensitivity in detecting high grade CIN in women with minor-grade cytological abnormalities. Clinical uptake of HPV DNA probing as a triage test should be considered to reduce unnecessary colposcopic examination and the worse, overtreatment.

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Growth Inhibition of Cervical Cancer Cells by Adeno Associate Viral Plasmid with Lipoposome (pAAVCMVp53/ lipofectin)

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Cervical cancer is strongly associated with human papillom virus (HPV) and the transforming viral genes E6 and E7 are steadily expressed by the tumor cells. To explore the potential of an adeno associated viral p53 for gene therapy of cervical cancer, we constructed pAAVCMVp53, CaSki, SiHa, HeLa, HeLaS3, C33A and HT3 cervical cancer cell lines were used for evaluate the growth inhibitory effect of pAAVCMVp53 transferred by lipofectin. These cells were cultured for 6 days, we divided transfection groups into five groups, control, only lipofectin-treated, only pAAVCMVp53-treated and pAAVCMVP53 with lipofectin group. Western blot was performed for confirming p53 gene expression after 1, 3, 5, days. The third day showed the highest expression of p53 protein. Transfection efficiency was about 50%. Cell proliferation was checked by cell counting after Trypan blues staining, cell viability assay by ELISA method stained by neutral red, and MTT assay was done. Cervical cancer cells transfected by pAAVCMVp53 with lipofectin was growth inhibited about 37% in CaSki, and 58% in SiHa, 35% in HeLa, 67% in HeLaS3, 53% in C33A and 37% in HT3 compared to control cells. These data suggest that transfection of cervical cancer cells by pAAVCMVp53 with lipofectin is a potential novel approch to the gene therapy of cervical cancer.

Key words : p53, pAAVCMVP53, cervical