Evaluation of human papillomavirus L1 capsid protein in liquid-based cervical cytology samples

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목적: To investigate using detection of human papillomavirus(HPV) L1 capsid protein to evaluate cervical intraepithelial neoplasia (CIN) and carcinoma.

방법: Immunocytochemical analysis using antibody against HPV L1 capsid protein was carried out on 1593 liquid-based cytology samples from high-risk HPV detected by HPV DNA chip test. Result of L1 capsid protein was compared to histologic diagnosis.

결과: L1 capsid protein was positive in 37.6% of cervicitis, 67.2% of CIN1, 60.2% of CIN2, 32.2% of CIN3 and 6.6% of carcinoma. Cytologic diagnosis in ASCUS, L1 capsid protein was detected in 53.3% of cervicitis, 70.2% of CIN1, 60.7% of CIN2, 38.2% of CIN3. Cervicitis and CIN1,2 revealed a higher expression rate than CIN3 and carcinoma in ASCUS(p<0.01).

결론: The decreased expression of HPV L1 capsid protein may correlate with disease progression. Expression of HPV L1 capsid protein may have significance in treating ASCUS.

Molecular profiles of microRNA in endometrial carcinoma using formalin-fixed paraffin-embedded (FFPE) tissues

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목적: This study was performed to provide the candidate miRNAs for further confirming the role of miRNAs in carcinogenesis of endometrioid adenocarcinoma using formalin-fixed paraffin-embedded (FFPE) tissue samples.

방법: We investigated the differences in miRNA expression profile in 8 fresh frozen tissues (4 endometrioid adenocarcinoma, 4 normal endometrium) using human miRNA microarray. Then we tested whether the same results can be obtained with RNAs purified from FFPE samples in miRNA expression studies. We next tested whether specific inhibition of overexpressed microRNAs would alter the chemosensitivity.

결과: The miR-200a*, miR-200b*, miR-141, miR-182, and miR-205 were greatly enriched in cancer tissue in microarray results. The expressions of these 5 miRNAs were validated using quantitative real time reverse transcription-PCR (qRT-PCR). Then, I performed qRT-PCR profiling of miR expression in 30 formalin-fixed paraffin-embedded (FFPE) specimens (20 endometrioid adenocarcinoma, 10 non-tumor specimens) and reconfirmed the results of differential expression between cancer and normal tissue. In in vitro cell viability assay, anti-miR200b* slightly enhanced cisplatin cytotoxicity compared with negative control although it showed marginal statistical significance (p=0.07).

결론: This information provided the candidate miRNAs for further confirming the role of miRNAs in carcinogenesis of endometrioid adenocarcinoma, and also provided that FFPE specimens can be successfully used for real-time PCR based quantitative miRNA expression studies.