

The Role of HPV E6/E7 Oncoproteins in Early Diagnostic of Cervical Precancerous Lesions

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Introduction. The role of mRNA E6/E7 High Risk (HR) HPV expression as a predictive marker of high grade cervical precancerous lesions has been presented in some studies (Fontecha 2016).

Aim, Materials and Methods. The aim of the study was to detect E6/E7 mRNA expression in patients with cervical intraepithelial neoplasia in Latvia. 95 women, aged 18–65 with abnormal cytology, referring for colposcopy during their first visit to Reference Colposcopy Centre in Riga East Clinical University Hospital in July, 2016–July, 2017 were included in the study. For each patient material from cervix for HR HPV E6/E7 common RNA was taken, under colposcopy control punch biopsy with a following histological examination was performed. HPV RNA E6/E7 oncoproteins were identified by real time PCR test.

Results. 27 patients with low grade squamous intraepithelial lesions (LSIL), 63 with high grade squamous intraepithelial lesions (HSIL), four patients with atypical squamous cells of undetermined significance (ASCUS) and one patient with atypical glandular cells of undetermined significance (AGUS) were included in the study.

HPVE6/E7 RNA presence was found in 76/95 cases: 3/4 cases of ASCUS cytology, 18/27 cases of LSIL group, 55/63 cases of HSIL cytology ($p < 0.01$). CIN2+ histology report strongly correlated with HPV E6/E7 RNA expression – 72/76 cases. In patients with HSIL cytology, punch biopsy CIN 2+ results were detected in all 63 cases. Punch biopsy histology results CIN 2+ in ASCUS group were detected in 3/4 cases and in patients with LSIL cytology in 9/27 cases. HPVE6/E7 RNA was positive in all of these 12 cases.

Conclusions. Our findings suggest that detection of HRHPV E6/E7 RNA simultaneously with cytology test may be a possible positive prognostic factor in early high grade cervical precancerous lesions diagnostic. More detailed studies for method standardisation are required.