

Frequency distribution of HPV18 based on the detection of E6 oncoprotein gene in cervix cancer samples

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Abstract:

Background: Persistent infection with high-risk human papillomavirus (HPV) is one of the most important risk factors for developing cervix cancer. Since cell culture and serological methods have no diagnostic value for the detection of this virus and its variants, the importance of molecular methods such as PCR in the early and definite diagnosis of such virus becomes evident. This study aimed to evaluate the frequency of HPV18 based on detecting E6 gene in paraffin block samples using the PCR method.

Materials and Methods: In this study, 69 out of 150 cervix samples of precancerous and cancerous lesions were collected during 2007-2012. DNA was extracted from paraffin blocks using the phenol/chloroform method. Two L1 and E6 consensus primers were used to evaluate the HPV and 18 HPV, respectively.

Results: Among 69 patients with cervix cancer, 53 (76.8%) cases were HPV-positive and 16 (23.19%) HPV-negative. Twelve out of 53 (17.39%) HPV-positive cases were HPV18-positive. Moreover, 6 cases were diagnosed with cervical intraepithelial neoplasia II, III and 6 with squamous cell carcinoma.

Conclusion: Results of the study confirm the previous reports concerning the relationship between HPV and cervix cancer. Considering the efficiency of DNA extraction and PCR protocol, we can use the test in pathology labs with simple and inexpensive facilities.

Keywords: E6 oncoprotein gene, Cervix cancer, HPV18 virus

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