

THE IMPORTANCE OF IDENTIFICATION OF HIGH RISK DNA HPV IN EVALUATION OF PATIENTS WITH ASCUS

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Abstract

Infections with high risk HPV cause cervical cancer when they are present in cases with ASCUS (atypical squamous cells of undetermined significance). A majority of these anomalies regress spontaneously, but some others no. While cytology is an effective method for cervical screening, HPV test has the potential to refine this method and to determine which patients need clinic evaluation. HPV test is proved to be useful in patients with equivocal results as ASCUS which is approximately half of anomaly results. Studies have shown that patients with LSIL and ASCUS in cytology, who can hide a high grade of CIN, can be identified through HPV test. Utility of HPV test in the detection of the illness is higher in low grade anomalies. A positive HPV test is used as a triage for colposcopic and histologic examination when the test is positive, or for normal control of cervix when the test is negative, waiting that cytology of these patients regresses to normality.

Material and Methods: This is a study of 43 cases selected from 241 patients who have done Pap test during the period January 2011-January 2012. Including criteria were all cases with repeated ASCUS in Pap test and all patients were 17-35 years old. HPV test was applied using method of Hybrid Capture -2 (QIAGEN). Type of high risk HPV identified from kit was HPV 16,18,31,33,35,39,45,51,52,56,59,68.

Results: 43 patients were selected according to the above criteria, 11 patients (25.6%) of these, resulted infected with one or more high risk HPV. So, one to 4 women are infected with high risk HPV. There is a significance difference between patients with ASCUS and high risk HPV positive and those with ASCUS and high risk HPV negative (d 50% CI 95% [40.5-59.5] $p < 0.01$). Colposcopic and histologic results of patients infected with high risk HPV were: 9 of patients (81.5%) results with CIN2 and 2 patients (18.2%) were with CIN3. Results of patients with high risk HPV negative were: 2

cases (6.2%) with CIN 2. So patients infected with high risk HPV have relative risk 13 times higher having CIN 2 in biopsy compared with those with high risk HPV negative (RR 13 CI 95% [10.5-14.5] $p < 0.05$).

Conclusion: Incorporation of HPV test in patients presented with repeated ASCUS is useful and helpful for the identification of patients with risk for developing cervical cancer. This test is very important for detection, prognosis and treatment of patients with ASCUS.

Keywords: ASCUS, LSIL, HSIL, high risk HPV etc.

Introduction

Despite high incidence and mortality, cervical cancer is totally prevented and curable, because of early detection of preinvasive and microinvasive status of illness. Many factors are accused for cervical cancer etiology, but oncogenic effect of HPV is confirmed. Epidemiologic, clinic, molecular and histologic data has recently accused HPV infection as causative for cervical cancer, especially for epithelial cervical cancer. HPV is an exclusive epitheliotrophic virus which infects all kinds of epithelial surfaces of vulva, vagina, cervix anus etc (1).

Special types of HPV cause special pathology with different clinic sign. So HPV 16,18, etc cause cervical cancer and dysplasia. Over 130 types of HPV are identified and over 30 of these touch female's anogenital tract (4). Infection begins when the virus wins access in basal epithelial cells. Minor traumas that are often caused by sexual act let virus to enter in target epithelial cells or in the transformation zone of the cervix. Neoplastic transformation induced by HPV, is associated with integration of a part of DNA-HPV genome, causes overrelease of E6 and E7 oncoproteins. These two oncoproteins interfere with rules of cell's cycle, inhibiting tumoral suppressor and causes damage and genetic instability and malign transformation (2).

The most of the patients, almost 80% are cleaned