



Influence of Human Papilloma Virus infection on early pregnancy

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Objective

HPV infection in early pregnancy may be a cause of miscarriage. Pregnancy significantly increases the risk of HPV infection. It can be an ascending intrauterine infection with colonization of the trophoblast, however descending hematogenous infection should also be considered. The aim of the study is to assess the prevalence of HPV infection and its influence on pregnancy.

Methods

The study was conducted on a group of 143 pregnant women examined between 2010-2015. The studied group consisted of 84 women with abnormal course of pregnancy in first trimester. The control group consisted of 59 women with normal pregnancy who delivered healthy neonates. Samples of cervix along with samples of trophoblast or placenta were analyzed. Presence of HPV virus and its genotype were detected using BIOTOOL B&M Labs set. Statistical analysis was conducted using R software.

Results

The rate of HPV infection in the entire studied population was 13% (19/143): the virus was confirmed in 18% (15/84) of patients in studied group and in 7% (4/59) of patients in control group. HR HPV was detected in 13 patients in the studied group and 3 patients in control group. It has been established that HR HPV infection is more frequent in patients with abnormal course pregnancy in first trimester ($p = 0.03$). HR HPV trophoblast infection was found only in patients in the studied group ($p = 0.02$). Moreover, in 2 cases HPV virus was found in trophoblast only.

Conclusion

1. The results may prove the hypothesis of adverse effects of HPV infection on early pregnancy. 2. HR HPV trophoblast infection was observed only in women with first trimester complications.