Prognostic evaluation criteria of the risk of HPV transmission from a mother to a fetus

Human papilloma virus (HPV) is one of the most common reproductively important infectious agents nowadays (X. Bosh, 2014). Apart from a sexual way of transmission there are some data concerning vertical transmission from an infected mother to a fetus (A.C. Freitas, 2013). Objective: to reveal prognostic criteria of HPV from an infected mother to a newborn.

Methods. 1) cytological investigation; 2) vaginal bacterioscopy; 3) PCR Real Time; 4) determination of sIgA concentration in cervical mucus; 5) statistical methods. Patients. 102 pregnant women with different forms of HPV-infection were examined. The first group included the women with PCR infection with high risk of carcinogenicity (HRC). 1A subgroup - 52 women with the latent form of the disease and 1B subgroup - 25 pregnant women with the subclinical form (included Cervical Intraepithelial Neoplasia). Group 2 - 25 pregnant women with anogenital warts (6 and 11 types of virus). Main outcomes and results. The incidence of revealing HPV in scraping of the oropharynx was determined in 24% of children in the 1B subgroup. 36% of the newborns infected with HPV were revealed in the group 2. The method of logistic regression with ROC curves fitting was applied.

Conclusions. The main risk factors influencing HPV transmission from an infected mother to a newborn are: 1) HPV HRC viral load in the genital tract appeared to be more than 3.9 lg per 100 000 epithelial cells; 2) the presence of squamous intraepithelial lesion (SIL); 3) disturbance of vaginal biocenosis; 4) decreasing of sIgA in cervical mucus less than 3,26±0,24 mkg/ml; 5) increasing of vaginal delivery continuation more than 9 hours; 6) increasing of waterless period continuation more than 6 hours regardless the method of delivery.