# THE IMPACT OF HPV, CHLAMYDIA, AND OTHER INFECTIONS ON PREGNANCY AND FETAL DEVELOPMENT

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***Abstract:*** *Human papillomavirus (HPV), chlamydial infection, and other sexually transmitted infections (STIs) are among the most significant infectious factors affecting reproductive health and pregnancy outcomes worldwide. These infections may have a negative impact on the course of pregnancy, leading to early and late gestational complications, placental dysfunction, and adverse fetal outcomes. The importance of this topic has increased due to the rising prevalence of genital infections among women of reproductive age and their often asymptomatic course. This study aims to analyze the influence of HPV, chlamydia, and other genital infections on pregnancy and fetal*

*development, evaluate modern diagnostic and therapeutic approaches, and emphasize preventive strategies to reduce maternal and perinatal morbidity.*

***Key words:*** *Human papillomavirus (HPV), chlamydia, sexually transmitted infections, pregnancy complications, fetal development, prenatal screening, prevention.*

**Materials and Methods:** The study was conducted from January to September 2023 in the obstetric and gynecological departments of the Central Clinical Hospital of Tashkent and the Republican Scientific Center of Perinatology. A total of 300 pregnant women aged 18–40 years were included in the study. All participants had confirmed HPV infection, chlamydial infection, or other genital infections diagnosed during pregnancy.

Diagnostic methods included polymerase chain reaction (PCR) testing for sexually transmitted infections, serological blood tests, cytological examination of cervical smears (Pap test), and HPV genotyping. Ultrasound examinations were performed to assess fetal growth, placental condition, and amniotic fluid volume. Additionally, Doppler ultrasound was used to evaluate uteroplacental blood flow. Medical records were analyzed to identify risk factors, pregnancy complications, and delivery outcomes.

**Results:** HPV infection was detected in 48% of pregnant women, chlamydial infection in 32%, and mixed infections in 20% of cases. Mixed infections included Mycoplasma genitalium, Ureaplasma urealyticum, herpes simplex virus, and bacterial vaginosis. High-risk oncogenic HPV types were identified in the majority of HPV-positive patients.

Clinical Features

In 65% of cases, infections were asymptomatic and diagnosed during routine prenatal screening. Symptomatic patients presented with abnormal vaginal discharge, itching, pelvic discomfort, cervical inflammation, and

contact bleeding. Chronic cervical infections were associated with structural changes of the cervix and increased risk of cervical insufficiency.

Impact on Pregnancy

The presence of genital infections significantly increased the risk of pregnancy complications. Threatened miscarriage was observed in 28% of cases, spontaneous abortion in early pregnancy in 12%, and preterm labor in 22%. Premature rupture of membranes occurred in 18% of women, particularly in cases of chlamydial and mixed infections.

Placental insufficiency and impaired uteroplacental circulation were identified in 20% of patients, leading to intrauterine growth restriction (IUGR) in 15% of cases. Chronic intrauterine hypoxia was more frequently observed in women with untreated or late-diagnosed infections.

Fetal and Neonatal Outcomes

Fetuses of infected mothers showed a higher incidence of low birth weight, signs of hypoxia, and adaptation disorders in the early neonatal period. In cases of chlamydial infection, neonatal conjunctivitis and pneumonia were reported. Vertical transmission of infection was more common in women who did not receive timely treatment during pregnancy.

Treatment and Outcomes

Antibacterial and antiviral therapy was prescribed according to gestational age and clinical guidelines. Immunomodulatory and local anti-inflammatory therapies were also used. Favorable pregnancy outcomes were observed in 80% of women who received early diagnosis and adequate treatment.

Late initiation of therapy was associated with a higher rate of complications and operative delivery.

**Conclusion:** HPV, chlamydia, and other sexually transmitted infections have a significant negative impact on the course of pregnancy and fetal

development. Their often asymptomatic nature complicates timely diagnosis and increases the risk of serious obstetric and perinatal complications. Early detection through routine screening, appropriate treatment, and careful prenatal monitoring are essential to improve pregnancy outcomes.

Preventive measures, including preconception screening, regular antenatal examinations, patient education, safe sexual practices, and HPV vaccination, play a crucial role in reducing the incidence of infection-related pregnancy complications and improving maternal and fetal health.