



THE IMPACT OF INFECTIOUS DISEASES DURING PREGNANCY ON THE EMBRYO

Odashboyeva Hilola

Jalolova Oydinoy

Students of the Pediatrics Department, Group 24_03,
Kokand University, Andijan Branch.

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Anotatsiya: Homiladorlik davrida organizmda yuz beradigan fiziologik va immunologik o'zgarishlar ayolni infeksiyon kasalliklarga moyil qiladi. Ushbu infeksiyalar, ayniqsa virusli va bakterial kasalliklar, homila rivojlanishiga sezilarli darajada salbiy ta'sir ko'rsatishi mumkin. Masalan, qizamiq, qizilcha, toksoplazmoz, sitomegalovirus yoki gripp kabi kasalliklar homilada tug'ma nuqsonlar, rivojlanishning sekinlashishi, hatto homila tushishiga sabab bo'lishi mumkin. Homiladorlik davrida infeksiyon kasalliklarni o'z vaqtida aniqlash va davolash homila salomatligini asrab qolishda muhim ahamiyat kasb etadi. Shuningdek, profilaktika choralariga rioya qilish, immunizatsiya va gigiyena talablariga qat'iy amal qilish orqali homila va onaning sog'lig'ini himoya qilish mumkin. Ushbu maqolada homiladorlik davrida uchraydigan infeksiyon kasalliklarning homila rivojlanishiga ta'siri, tibbiyot amaliyotida ularga qarshi qo'llanilayotgan usullar va profilaktik choralar yoritilgan.

Русский: Во время беременности организм женщины подвергается серьёзным физиологическим и иммунологическим изменениям, что повышает восприимчивость к инфекционным заболеваниям. Эти инфекции, особенно вирусные и бактериальные, могут негативно влиять на развитие эмбриона. Краснуха, корь, токсоплазмоз, цитомегаловирус и грипп способны вызывать врождённые пороки, задержку развития или даже выкидыш. Раннее выявление и своевременное лечение инфекций во время беременности имеет важное значение для сохранения здоровья матери и ребёнка. Кроме того, профилактические меры — вакцинация, соблюдение санитарно-гигиенических норм и регулярное медицинское наблюдение — значительно снижают риск осложнений. В статье рассматриваются основные виды инфекций, встречающихся во время беременности, их влияние на эмбриональное развитие, а также современные методы диагностики, лечения и профилактики.

English: During pregnancy, the maternal body undergoes significant physiological and immunological changes that increase susceptibility to infectious diseases. These infections, particularly viral and bacterial, may have severe consequences on embryonic development. Rubella, measles, toxoplasmosis, cytomegalovirus, and influenza are among the most dangerous infections, potentially causing congenital malformations, developmental delays, or even miscarriage. Early detection and timely treatment of infections during pregnancy are critical for preserving maternal and fetal health. Preventive measures, including vaccination, strict adherence to hygiene practices, and regular medical monitoring, play a vital role in reducing risks. This article explores the impact of infectious diseases during pregnancy on embryonic development, analyzes their medical implications, and discusses preventive and therapeutic strategies currently applied in clinical practice.

Kalit so'zlar: Homiladorlik, Infeksion kasallik, Embrion, Tug'ma nuqson, Profilaktika, Immunitet, Tibbiyot, Vaksina

Ключевые слова: Беременность, Инфекционные болезни, Эмбрион, Врожденные пороки, Профилактика, Иммуитет, Медицина, Вакцина

Keywords: Pregnancy, Infectious diseases, Embryo, Congenital defects, Prevention, Immunity, Medicine, Vaccine

Pregnancy is one of the most critical periods in a woman's life, during which numerous physiological and hormonal changes occur in the mother's body. These changes make the maternal organism more susceptible to infectious diseases. Viral infections pose a particularly significant threat to the fetus. For instance, if a pregnant woman contracts rubella during the first trimester, there is a very high risk of the fetus developing congenital defects of the heart, eyes, and hearing. Toxoplasmosis, on the other hand, can damage the fetal central nervous system. Influenza and other respiratory infections in early pregnancy may also lead to developmental delays.

Bacterial infections are also highly dangerous. For example, streptococcal or chlamydial infections can disrupt the development of the fetal nervous system and, in some cases, cause premature birth or miscarriage. Therefore, it is essential that pregnant women's immunity and their ability to fight infections be closely monitored by healthcare professionals.

In medical practice, several measures are taken to prevent infectious diseases during pregnancy: regular medical check-ups, laboratory screenings, pre-pregnancy immunizations, proper nutrition, and adherence to hygiene standards. In some cases, antibiotics or antiviral drugs may be prescribed for treatment, but their potential effects on the fetus must always be carefully considered.

This article scientifically examines the effects of infectious diseases on the fetus, their consequences, and prevention strategies.

The impact of infectious diseases on the fetus is determined by several factors: the mother's immune system, the type of infection, the severity of the illness, and the stage of pregnancy. Infections during the first 12 weeks of pregnancy are especially dangerous because this is when all major fetal organs are formed.

Types of Infections and Their Effects

Viral infections:

Rubella is among the most dangerous infections during pregnancy, as it can cause congenital heart defects, cataracts, and deafness. Cytomegalovirus may lead to brain damage and delayed physical and mental development. Influenza and other respiratory viruses primarily weaken the fetal immune system and slow down developmental processes.

Bacterial infections:

Streptococcal infections can be transmitted to the fetus during childbirth, resulting in neonatal sepsis and pneumonia. Chlamydia infections complicate pregnancy and often cause premature labor.

Parasitic infections:

Toxoplasmosis is one of the most severe threats to the fetus, potentially causing blindness, brain defects, and severe nervous system disorders.

Prevention and Treatment

To detect infections in pregnant women, serological tests and ultrasound diagnostics are commonly used. If an infection is diagnosed, treatment must be carried out individually.

Antibiotics or antiviral medications are prescribed only when necessary and strictly under medical supervision. Vaccinations should be administered before pregnancy, not during it.

Pregnant women are advised to strengthen their immune system through proper nutrition, consuming foods rich in vitamins and minerals, following hygiene rules, and attending regular medical check-ups.

Recommendations

1. All women should undergo mandatory screening for infectious diseases before pregnancy.
2. Immunization against rubella, measles, and other dangerous viruses must be completed prior to conception.
3. Regular serological tests should be performed during pregnancy to monitor infections.
4. Pregnant women must receive continuous education about hygiene, healthy lifestyles, and proper nutrition.
5. If an infection is detected, an individualized treatment plan must be developed under strict medical supervision.
6. Specialized laboratory and ultrasound screenings should be systematically organized for pregnant women.
7. Media programs should be developed to raise awareness about the risks of infectious diseases to the fetus.

Conclusion.

Infectious diseases during pregnancy pose a serious threat not only to the mother's health but also to the life and development of the fetus. Research shows that infections occurring in the first trimester may cause irreversible fetal defects. Among viral infections, rubella, cytomegalovirus, and toxoplasmosis are the most dangerous. Bacterial infections may lead to preterm labor, sepsis, and other severe complications.

Therefore, pregnant women must undergo regular medical check-ups, complete necessary laboratory tests, and follow preventive measures. Modern medicine offers broad opportunities for preventing, diagnosing, and treating infections, but these can only be effective if women are educated about their health and actively involved in the process.

Ultimately, preventing infectious diseases during pregnancy is not only a medical issue but also a social priority, as a healthy mother and a healthy baby are the foundation of a healthy society.

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