

CLINICAL AND MORPHOLOGICAL CHARACTERISTICS OF MATERNAL DEATHS ARISING AS A RESULT OF URINARY TRACT INFECTIONS IN PREGNANT WOMEN LIVING IN KHORESM REGION

<https://doi.org/10.5281/zenodo.18193833>

Artikova D.O., Karimov R.Kh., Ruzmetova D.T.
URGENCH STATE MEDICAL INSTITUTE

Relevance of the topic: Treatment of urinary tract infection (UTI) in pregnant women is one of the urgent problems of obstetrics and nephrology, but despite the progress made in this area, the problem is still unresolved.

UTIs occur in 5-10% of pregnant women, and approximately 5% of patients require hospitalization. UTIs account for approximately 40% of bacterial infections complicating pregnancy. Urinary tract infections are diagnosed in 1 in 4 pregnant women and complicate pregnancy in 3 in 5. Premature rupture of membranes is a major problem in obstetrics and neonatology worldwide. Premature rupture of membranes accounts for 38-51% of all preterm births [1]. Intrauterine infections are infections that cause inflammation in the uterus, vagina, umbilical cord, amniotic sac, placenta, and amniotic fluid [Romero R., Gomez-Lopez N., Kusanovic J.P.].

Keywords: Premature rupture of membranes (PROM), chorioamnionitis, septic complications, metraendometritis.

Premature rupture of membranes (PROM) is associated with perinatal infection and increases the risk of neonatal sepsis, high perinatal and neonatal mortality, and maternal purulent-septic complications by 10 times [2]. The incidence of rupture of membranes in term pregnancies is 8.2%-19.6%, while the incidence of rupture of membranes before 37 weeks of gestation is 5%-35%. Women who have ruptured prematurely in their first pregnancy have a 20-32% risk of rupture of membranes in subsequent pregnancies [3].

In recent decades, the incidence of kidney disease in pregnant women has increased. Kidney pathology negatively affects the course of pregnancy and the condition of the fetus. This is often expressed in spontaneous abortion, the addition of late toxicosis, perinatal pathology and death. Despite the importance of the problem, kidney pathology and changes in kidney function during pregnancy are still being studied. Urinary tract infections (UTIs) are one of the main problems of extragenital infectious pathology in obstetric practice and remain relevant today. This is due to their prevalence, clinical significance, tendency to transition to purulent-destructive forms of the disease, the development of severe complications,

and the impact on the condition of the fetus and newborn. Urinary tract infection is an infectious inflammatory disease of any part of the urinary system, including the kidneys, bladder and urethra. The most important task in women's lives is to reproduce, but we observe that certain pregnant women are susceptible to infectious diseases.

Especially in pregnant women, urinary tract infections are very common. Any discomfort in the human body, especially pain, has a very strong effect on the human nervous system, and in pregnant women, such conditions also lead to unpleasant situations such as severe stress and depression. Systemic antibacterial therapy of subclinical intrauterine infections during pregnancy is considered a proven treatment. There is a view that the earlier antibiotic therapy is started, the more the inflammatory process regresses and the duration of pregnancy is prolonged. The problem of women with intrauterine infections is urgent, because this is directly related to the perinatal outcome. The use of systemic antibacterial therapy in the second trimester of pregnancy helps to prevent premature rupture of membranes and septic complications.

During pregnancy, the susceptibility to various diseases increases, especially infectious diseases are very common, and the main treatment at this time is antibiotics. Any inflammatory processes in the uterus are dangerous and can later lead to miscarriage or infertility. Timely treatment of pregnant women prevents premature rupture of membranes and the subsequent development of septic complications.

Objective: To achieve the effectiveness of preventive and therapeutic measures for the prevention of urinary tract infections in pregnant women in the Khorezm region during 2022-2025.

Research objectives:

1. To study the risk factors leading to urinary tract infection and prevent deaths based on anamnestic data obtained from pregnant women living in the Khorezm region with urinary tract infection during 2022-2025.
2. To determine the risk of possible complications in pregnant women with urinary tract infection based on the analysis of clinical and laboratory tests (Nicheporenko urine test, general urinalysis, general blood test, biochemical blood test, vaginal microflora, blood coagulogram tests).
3. To develop preventive measures and evaluate the effectiveness of treatment in pregnant women with urinary tract infection based on the data obtained.

Object of the study: 50 pregnant women with urinary tract infection were recruited to the perinatal center of the Khorezm region, 50 retrospectively and 50 prospectively, and 20 as a control group.

Subject of the study: materials for improving the data on the results of clinical and morphological, ultrasound examination, clinical and laboratory analysis of pregnant women with urinary tract infection were obtained.

Methods of the study: The study includes clinical anamnestic, clinical and morphological, ultrasound examination, clinical and laboratory analysis, statistical and retrospective and prospective examination analyses.

The scientific novelty of the study is as follows:

For the first time, early detection of infection in pregnant women with urinary tract infection living in the Khorezm region is carried out from the clinical and morphological aspect.

Based on modern clinical and laboratory analysis of pregnant women with urinary tract infections, the infections that cause the disease are identified and preventive measures are developed to prevent it.

The practical results of the study are as follows:

It will serve as a fundamental basis for the correction of immune organs in pregnant women with urinary tract infections living in the Khorezm region, the development of practical recommendations, and corrective treatment of immunopathologies.

It is based on the adequate selection of material, the modernity of the methods used, the fact that the clinical-morphological characteristics and morphofunctional indicators of urinary tract infections were compared with risk factors, international and local literature data, and the conclusions drawn based on the results obtained were confirmed by competent systems based on the methods of obstetric, gynecological, clinical-laboratory examination, ultrasound examination, forensic medical examination, clinical-morphological, histochemical and statistical examination, which complement each other.

REFERENCE:

1. World Health Organization. *WHO recommendations for prevention and treatment of maternal peripartum infections*. Geneva: WHO; **2023**.
2. Bonet, M., Souza, J. P., Abalos, E., Fawole, B., Knight, M. The global burden of maternal sepsis: recent evidence and clinical implications. *The Lancet Global Health*. 2023;11(4):e552–e564.
3. Padmavathi, S., Govindarajan, R., Suresh, S. Urinary tract infections in pregnancy: maternal complications and adverse outcomes. *BMC Pregnancy and Childbirth*. 2024;24:112

4. Knight, M., Acosta, C. D., Brocklehurst, P. Maternal infection and sepsis-related mortality: lessons from recent confidential enquiries. *International Journal of Gynecology & Obstetrics*. 2024;166(2):245-252.
5. Zhang, Y., Liu, H., Chen, X., Wang, Y. Pathological and clinical characteristics of maternal deaths due to sepsis in low- and middle-income settings. *Archives of Gynecology and Obstetrics*. 2025;311(1):45-53.
6. Artikova, D. O., & Sadullayev, S. E. (2025). CHRONIC VIRAL HEPATITIS B-EPIDEMIOLOGY, PATHOGENESIS, CLINICAL FEATURES, DIAGNOSIS, AND CURRENT THERAPEUTIC STRATEGIES (LITERATURE REVIEW). *AMERICAN JOURNAL OF APPLIED MEDICAL SCIENCE*, 3(11), 259-268.
7. Sadullayev, S. E., Yoqubov, Q. Y., Artikova, D. O., & Khasanova, M. F. (2025). DIAGNOSTIC DIFFERENCES BETWEEN COVID-19 AND ACUTE RESPIRATORY INFECTIONS: LITERATURE REVIEW AND MODERN PERSPECTIVES. *AMERICAN JOURNAL OF APPLIED MEDICAL SCIENCE*, 3(11), 12-16.
8. Otabaevna, A. D., & Rakhimbaevich, Y. S. (2025). TRAINING OF MEDICAL STAFF OF THE DISPENSARY IN MONITORING TUBERCULOSIS IN THE REGION. *European science*, (2 (74)), 24-27.
9. Артикова, Д. О., Каримов, Р. Х., Рузметова, Д. Т., & Бекчанова, А. Ш. (2025). ВЗАИМОСВЯЗЬ ИНФЕКЦИИ МОЧЕВЫВОДЯЩИХ ПУТЕЙ И ПРЕЖДЕВРЕМЕННОГО РАЗРЫВА ПЛОДНЫХ ОБОЛОЧЕК У БЕРЕМЕННЫХ ЖЕНЩИН ХОРЕЗМСКОЙ ОБЛАСТИ. *Наука и образование сегодня*, (3 (84)), 113-115.
10. Rakhmatullaeva, S. B., Muminova, M. T., & Ilyasova, M. M. (2023). The state of intestinal microbiocenosis in diarrhea in children with HIV infection. *Oriental Journal of Medicine and Pharmacology*, 3(03), 17-26.
11. Tuychiev, L., Khudaykulova, G., Muminova, M., Eraliev, U., & Sadikov, H. M. (2021). THE ETIOLOGICAL STRUCTURE OF INFECTIOUS GENESIS DIARRHEA IN HIV-INFECTED CHILDREN.
12. Попова, А. Ю., Руженцова, Т. А., Хавкина, Д. А., Туйчиев, Л. Н., Ахмедова, М. Д., Мадазимов, М. М., ... & Жанибеков, Ж. Ж. (2021). Опыт международного сотрудничества по организации учреждениями здравоохранения противоэпидемических мероприятий в условиях пандемии COVID-19 в Республике Узбекистан. *Проблемы особо опасных инфекций*, (3), 122-128.
13. Ералиев, У. Э., & Садуллаев, С. Э. (2020). Molecular genetic characteristics of rotavirus infection in children. *Молодой ученый*, (38), 46-48.

14. Sadullaev, S. E., Bobajanov, A. O., Khusinbayev, I. D., Durdiev, E. S., & Ismoilova, A. R. (2025). PSYCHOLOGICAL REHABILITATION DURING THE CORONAVIRUS PANDEMIC. Multidisciplinary Journal of Science and Technology, 5(2), 429-433.
15. Aktamovna, I. Z., Abdullayevna, K. T., & Sajid, M. A. A. (2022). Comparative assessment of renal complications in children during the COVID-19 pandemic.
16. Artikov, I. A., Sadullaev, S. E., Ibrakhimova, H. R., & Abdullayeva, D. K. (2023). RELEVANCE OF VIRAL HEPATITIS EPIDEMIOLOGY. IMRAS, 6 (7), 316-322.
17. Ibrakhimova, H. R., Matyakubova, O. U., Sadullaev, S. E., & Abdullayeva, D. K. (2023). HELMINTISES IN CHILDREN AMONG THE POPULATION IN UZBEKISTAN. IMRAS, 6 (7), 323-327.
18. Aktamovna, I. Z., Ismoilovna, A. N., & Sajid, M. A. A. (2022). Clinic and laboratory characteristics of acute kidney failure in children during the COVID-19 pandemic.
19. Sadullaev, S. E., Ibragimov, S. J., Bobojonov, Y. B., Yoqubov, Q. Y., Abdullayeva, D. K., & Khasanova, J. R. (2024). PREVALENCE OF DIARRHEAL DISEASES IN THE REPUBLIC OF UZBEKISTAN. International Journal of Education, Social Science & Humanities, 12(3), 356-363.
20. Хасанова, М. Ф. (2023). ПЕРСПЕКТИВЫ РАЗВИТИЯ СПОРТА СРЕДИ СТУДЕНТОВ ТАШКЕНТСКОЙ МЕДИЦИНСКОЙ АКАДЕМИИ УРГЕНЧСКОГО ФИЛИАЛА. Журнал Наука, техника и образование, 83-86.
21. Ismoilova, Z. A., & Ahmedjanova, N. I. (2023). The role of lipocalin-2 associated with neutrophil gelatinase (ngal) in the development of acute nephrological pathology in children against the background of covid-19. European International Journal of Multidisciplinary Research and Management Studies, 3(06), 151-156.
22. Хасанова, М. Ф. (2021). Опасность туберкулеза с сочетанной вич-инфекцией. European science, (6 (62)), 46-50.
23. Хасанова, М. Ф. Диагностика аллергического бронхита с иммунологическими изменениями у больных туберкулезом. European research, (4), 81.
24. Ismailov, K. Y., & Abdullaev, I. K. Research of the Distribution and Transmission of Covid-19 Infection. JournalNX, 686-691.
25. Хасанова, М. Ф., & Юсупов, Ш. Р. (2024). Изучение иммунологических аспектов диагностики аллергического бронхита у больных туберкулезом легких. Academy, (4 (80)), 23-27.

26. Атаджанова, О. Н., & Хасанова, М. Ф. (2024). ПЕРСПЕКТИВА ПРИМЕНЕНИЯ ФИТОТЕРАПИИ У БОЛЬНЫХ ТУБЕРКУЛЕЗОМ ЛЕГКИХ. Вестник науки и образования, (1 (144)-2), 73-77.
27. Ismailov, K. (2019). THEORETICAL-LEGAL APPROACHES TO THE PROBLEMS OF INFORMATION-ANALYTICAL ACTIVITIES OF THE NATIONAL POLICE AT THE MODERN STATE OF COOPERATION. European Reforms Bulletin, 109.
28. Хасанова, М. Ф., & Юсупов, Ш. Р. (2025). Современные аспекты лечения больных кавернозным туберкулезом. Вестник науки и образования, 107-109.
29. Хасанова, М. Ф., & Юсупов, Ш. Р. (2025). Особенности течения первичных форм туберкулеза у детей и подростков. Academy-2025 год, (2), 82.