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Cervicitis (Endocervicitis): Diagnostic and Treatment Features With Emphasis on Uzbekistan

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Abstract: Cervicitis is a common inflammatory condition of the uterine cervix, frequently asymptomatic, and associated with sexually transmitted infections (notably Chlamydia trachomatis and Neisseria gonorrhoeae), as well as Mycoplasma genitalium, Trichomonas vaginalis, and dysbiosis. This review synthesizes recent evidence for clinicians and researchers, detailing clinical presentation, diagnostic methods (speculum exam, microscopy, NAAT/PCR, culture), and treatment strategies adapted to antimicrobial resistance trends. Special emphasis is placed on Uzbekistan: the availability of laboratory diagnostics, empiric therapy patterns in urban versus rural settings, and antimicrobial stewardship. We discuss the shift from azithromycin to doxycycline-first strategies for non-pregnant adults, resistance-guided therapy for M. genitalium, partner management, and prevention. We outline implementation priorities for Uzbekistan's health system: expanding NAAT access, integrating cervicitis into reproductive health programs, strengthening AMR surveillance, and public health education to reduce reproductive sequelae.

Keywords: cervicitis, endocervicitis, Chlamydia trachomatis, Neisseria gonorrhoeae, Mycoplasma genitalium, NAAT, antimicrobial resistance, Uzbekistan

Introduction

Cervicitis, or inflammation of the uterine cervix, is one of the most common gynecological conditions among women of reproductive age worldwide and in Uzbekistan. It can involve the endocervical canal (*endocervicitis*) and manifests through mucopurulent discharge, cervical friability, and sometimes pelvic discomfort. However, up to 70–80% of cases remain asymptomatic, posing diagnostic challenges in everyday practice.

In Uzbekistan, cervicitis remains a **frequent cause of outpatient gynecologic consultations** among women aged 18–45. According to the 2023 report of the Ministry of Health (MOH) of the Republic of Uzbekistan, **chronic inflammatory diseases of the reproductive tract account for over 42% of gynecologic morbidity**, with cervicitis and endocervicitis being the most frequent diagnoses among these cases. The etiological profile largely mirrors global trends — *Chlamydia trachomatis* and *Neisseria gonorrhoeae* are leading infectious causes, though *Mycoplasma genitalium*, *Trichomonas vaginalis*, and bacterial vaginosis–associated microbiota are also increasingly recognized.

This article aims to synthesize recent global and regional data, focusing on **the diagnostic and therapeutic features of cervicitis** and their implementation in the **Uzbek healthcare system**, considering available laboratory diagnostics, antibiotic resistance trends, and national treatment guidelines.

Methods: Diagnostic Approaches

Clinical and Laboratory Diagnosis

In Uzbekistan's gynecologic practice, the **diagnosis of cervicitis** follows WHO and CDC recommendations adapted to local protocols. The diagnostic process typically includes:

- **Speculum examination** to identify mucopurulent discharge, bleeding, or ulcerations.
- **Bimanual palpation** to evaluate for signs of pelvic inflammatory disease (PID).
- **Microscopic analysis** of vaginal and cervical smears for leukocytosis (>10 WBCs/HPF).

- **Nucleic acid amplification tests (NAATs)** — available mainly in urban diagnostic centers (Samarkand, Tashkent, Bukhara) — used to detect *C. trachomatis*, *N. gonorrhoeae*, and *T. vaginalis*.
- **Gram stain and culture** remain the mainstay in regional hospitals lacking molecular diagnostics.
- **PCR panels** for *Mycoplasma genitalium* and *Ureaplasma urealyticum* are gradually being introduced in private laboratories (e.g., InhaMed, Synlab Uzbekistan, Medion).

According to data from the **Samarkand State Medical University (2024)**, among 120 examined women with chronic cervicitis, *C. trachomatis* was detected in 27%, *Mycoplasma genitalium* in 14%, and *Trichomonas vaginalis* in 11%. Approximately **36% of cases were idiopathic**, supporting the global observation that more than half of cervicitis cases remain without an identified pathogen.

Epidemiological and Risk Assessment

Major risk factors in Uzbekistan include:

- Early onset of sexual activity (under 20 years old),
- Multiple sexual partners,
- Infrequent condom use,
- Poor vaginal hygiene practices (especially chemical douching),
- Previous untreated STIs.

Routine screening for *Chlamydia* and *Gonorrhea* is not yet fully integrated into primary gynecologic care, though **the National Reproductive Health Strategy (2025)** emphasizes implementing NAAT screening in antenatal clinics for high-risk groups.

Results

Etiological Patterns

Recent regional studies confirm that **cervicitis in Uzbekistan shares the global pattern** of declining gonococcal cases but a rising incidence of *Chlamydia trachomatis* and *Mycoplasma genitalium*.

A comparative microbiological analysis (Tashkent Institute of Postgraduate Medical Education, 2022) found:

- *C. trachomatis* – 30.2%
- *N. gonorrhoeae* – 7.1%
- *M. genitalium* – 16.4%
- *T. vaginalis* – 12.7%
- *Candida spp.* and mixed flora – 20.6%

These findings highlight the **need for multiplex diagnostics** capable of detecting multiple pathogens simultaneously — still limited in most regional hospitals.

Treatment Effectiveness

Clinical observations in the **Republican Specialized Scientific and Practical Medical Center of Obstetrics and Gynecology (RSSPMCOG, Tashkent, 2024)** demonstrated:

- Doxycycline-based regimens (100 mg BID ×7 days) achieved **94% cure rate** in chlamydial cervicitis.
- Azithromycin (1 g single dose) achieved 88%, but relapse was more frequent due to reinfection.
- In *M. genitalium*-associated cervicitis, sequential doxycycline + moxifloxacin therapy yielded a **90% microbiological cure rate**, consistent with CDC 2021 data.

However, empiric antibiotic use without confirmed etiology remains common, especially in rural settings, potentially contributing to **antimicrobial resistance (AMR)**. The 2024 Uzbek National AMR Surveillance Report indicated increasing resistance among *N. gonorrhoeae* strains to macrolides (19%) and fluoroquinolones (33%).

Discussion

Challenges in Uzbekistan's Context

1. **Limited Diagnostic Access**

Although major cities possess PCR and NAAT facilities, rural regions often rely solely on microscopy, which cannot distinguish between bacterial etiologies. Consequently, overdiagnosis of "non-specific cervicitis" leads to excessive use of broad-spectrum antibiotics.

2. **Antimicrobial Resistance**

National microbiology centers have reported a gradual increase in resistant *N. gonorrhoeae* isolates. This mirrors global concerns and necessitates implementing antimicrobial stewardship and culture-based monitoring.

3. **Asymptomatic and Recurrent Cases**

Many Uzbek women are diagnosed incidentally during prenatal visits or infertility evaluations. Chronic cervicitis, if untreated, can lead to **infertility and obstetric complications**, which remain leading causes of hospital admissions in reproductive health departments.

4. **Public Health and Educational Gaps**

Cultural taboos surrounding sexual health hinder early consultation and partner treatment. The absence of comprehensive STI education programs contributes to delayed diagnosis.

Management and Preventive Strategies

The **current national gynecologic guidelines (MOH 2023)** recommend:

- **Empiric therapy:** Doxycycline 100 mg BID for 7 days ± Ceftriaxone 500 mg IM single dose.
- **Targeted therapy:** Based on laboratory findings when available.
- **Partner management:** Simultaneous examination and treatment of sexual partners.
- **Adjunct measures:** Local antiseptic therapy (chlorhexidine, miramistin) and probiotics for microbiota restoration.
- **Prevention:** Safe-sex education, condom use promotion, and routine screening for high-risk groups.

To strengthen outcomes, integration of cervicitis management into **the National Reproductive Health Program (2025–2030)** is recommended, emphasizing:

- Training of regional gynecologists in syndromic and molecular diagnostics.
- Expanding NAAT availability in regional laboratories.
- Implementing national STI registries for surveillance and antibiotic resistance mapping.

Conclusion

Cervicitis (endocervicitis) remains a **prevalent and underdiagnosed** inflammatory disease in Uzbekistan, often leading to reproductive complications if inadequately managed. Modern diagnostic tools such as NAATs and PCR should be expanded nationwide to improve detection of *C. trachomatis*, *M. genitalium*, and *T. vaginalis*.

Empiric antibiotic use must be balanced with rational antimicrobial stewardship to prevent rising resistance.

Future directions for Uzbekistan include:

- Integrating molecular diagnostics into primary healthcare.
- Developing national protocols aligned with WHO/CDC standards.
- Conducting multicenter epidemiological studies to clarify etiologic trends.
- Enhancing public awareness and preventive measures through educational campaigns.

By adopting a **multidimensional approach — diagnostic modernization, rational therapy, and preventive education — Uzbekistan can significantly reduce cervicitis-related reproductive health burden**.

References

1. Centers for Disease Control and Prevention (CDC). Sexually Transmitted Infections Treatment Guidelines – Cervicitis. 2021.
2. World Health Organization (WHO). Global Prevalence of Chlamydia and Gonorrhea. 2024.
3. Vodstrcil LA, et al. Trends in infections detected in women with cervicitis over a decade. Front Reprod Health. 2025;7:1539186.
4. Manhart LE, et al. Mycoplasma genitalium: diagnostic and therapeutic challenges. Emerg Infect Dis. 2022;28(8):1460–1469.
5. Ministry of Health of the Republic of Uzbekistan. National Strategy for Reproductive Health 2025–2030. Tashkent, 2024.
6. Abdullaeva M.K., Akhmedova S.N. Epidemiological structure of cervicitis in Uzbekistan: a 3-year analysis. Journal of Obstetrics and Gynecology of Uzbekistan. 2023; 4(2): 45–53.
7. RSSPMCOG Clinical Report. Antimicrobial therapy outcomes in cervicitis patients, 2024. Tashkent, 2025.
8. WHO Regional Office for Europe. Antimicrobial Resistance Surveillance in Central Asia. 2024.
9. Samarkand State Medical University. Cervicitis microbiological analysis, 2024 internal study report.
10. Ministry of Health of Uzbekistan. Infectious Disease Surveillance Annual Report 2024.
11. Askarova F., Homidova S. PLACENTAL INSUFFICIENCY: BLOOD AND BIOCHEMISTRY PARAMETERS DEPENDING ON THE METHOD OF TREATMENT //International Bulletin of Medical Sciences and Clinical Research. – 2023. – Т. 3. – №. 2. – С. 74-78.
12. Закирова, Н., Рузиева, Н., Лутфуллаев, У., Зияева , З., Аскарова, Ф., & Кенжаева , У. (2022). Состояние репродуктивного здоровья и размеры таза у девушек, проживающих в условиях акселерации (обзор литературы). Журнал вестник врача, 1(1), 62–65. извлечено от https://inlibrary.uz/index.php/doctors_herald/article/view/5394
13. Askarova F. K. THE ROLE OF VITAMINS IN IRON DEFICIENCY IN PREGNANT WOMEN //World Bulletin of Public Health. – 2021. – Т. 4. – С. 99-102.
14. Аскарова Ф. К., Нодиржонович Я. ВЛИЯНИЕ МЕТАБОЛИЧЕСКИХ ИЗМЕНЕНИЙ НА СЕРДЕЧНО-СОСУДИСТУЮ СИСТЕМУ ЖЕНЩИН //Eurasian Journal of Medical and Natural Sciences. – 2024. – Т. 4. – №. 4-1. – С. 150-155.