ISSN 2181-3187

TYPES, DIAGNOSIS AND TREATMENT METHODS OF SKIN AND GENITAL INFECTIONS

Jiyanmuradova Shakhlo Khamdamovna[1]

Berdiqulova Nozanin Botir qiz[2]

[1]Teacher, Zarmed University

[2]First-year student, Higher Nursing Education Program, Zarmed University

Annotation: This article presents scientific information on skin and urogenital infections, their types, causes, clinical manifestations, diagnostic methods, and treatment approaches. Special attention is also given to preventive measures against these infections.

Skin and urogenital infections are among the diseases that pose a serious threat to public health, and their timely detection and effective treatment are of great importance. The article discusses modern diagnostic and treatment methods and highlights in detail the role of preventive measures in reducing the incidence of these diseases.

Keywords: Infections, dermatovenerology, clinical manifestations, diagnosis, treatment, prevention, medicine, public health

Introduction. Skin and sexually transmitted infections (STIs) are a group of infectious diseases affecting the skin and genital organs, mainly caused by microorganisms such as bacteria, viruses, fungi, and parasites.

STIs represent a pressing global health issue in modern medicine, and their prevalence is increasing significantly among various population groups. According to the World Health Organization (WHO), more than 376 million new STI cases are

ISSN 2181-3187

reported worldwide each year. Among these infections, gonorrhea, syphilis, chlamydia, and genital herpes are the most common. STIs not only negatively affect patients' physical health but also have a detrimental impact on their psychological well-being. Furthermore, some infections can seriously impair reproductive system function, leading to infertility, pregnancy complications, and mother-to-child transmission. Therefore, timely diagnosis, effective treatment, and implementation of preventive measures are essential tasks.

This article provides a detailed overview of the clinical features, diagnostic methods, modern treatment approaches, and preventive strategies for STIs. It also analyzes new diagnostic technologies and treatment strategies used in medical practice.

The content of this article has both theoretical and practical significance for healthcare professionals, students, and researchers.

Main Part. Types and Causes of Skin and Sexually Transmitted Infections. Skin and sexually transmitted infections are caused by various microorganisms and are classified into bacterial, viral, fungal, and parasitic infections.

Bacterial infections include gonorrhea, syphilis, and chlamydia. Viral infections include human papillomavirus (HPV), genital herpes, and human immunodeficiency virus (HIV/AIDS). Fungal infections most commonly manifest as candidiasis, while parasitic infections include trichomoniasis and others. Each type of infection has specific pathogenetic features and differs in clinical presentation, duration, and complications. The main risk factors for STIs include unprotected sexual activity, poor hygiene, weakened immune system, and social factors such as low educational level and inadequate health awareness.

Infections are primarily transmitted through sexual contact, but in some cases, they may spread through direct contact with skin and mucous membranes or via contaminated objects.

Clinical Manifestations and Diagnostic Methods. Common clinical symptoms of STIs include redness, swelling, pain, itching, discharge, and ulcer formation in the

ISSN 2181-3187

skin or genital area. In some cases, the disease may become chronic, complicating diagnosis. Therefore, accurate diagnosis requires laboratory methods such as microscopy, culture (cultivation), serological tests, and molecular diagnostic methods such as PCR (polymerase chain reaction). PCR diagnostics is characterized by high sensitivity and accuracy, allowing detection of viral and bacterial DNA or RNA. Additionally, immunofluorescence and ELISA tests are widely used.

Treatment Methods and Approaches. Effective treatment of STIs involves both etiological (eliminating the causative agent) and symptomatic approaches.

Bacterial infections are treated with antibiotics, while viral infections are managed with antiviral drugs. For example, penicillin and other antibiotics are effective in treating gonorrhea and syphilis, whereas antiviral drugs such as acyclovir are used for genital herpes.

During treatment, it is essential to carefully consider drug dosage, duration, and contraindications. Strengthening the immune system through supportive medications and promoting a healthy lifestyle are also important.

In addition, in certain infections, it is recommended that sexual partners undergo examination and treatment as part of both therapeutic and preventive measures. Prevention and Control Measures. The most effective way to prevent STIs is through preventive measures. These include sexual education, adherence to hygiene rules, use of personal hygiene products, practicing safe sex (use of condoms), and regular medical check-ups.

Vaccination is available for some viral infections (e.g., HPV), which helps reduce the spread of the virus. Promoting a healthy lifestyle, strengthening awareness campaigns, and continuous training of healthcare professionals further enhance the effectiveness of prevention strategies. Social and Medical Significance of STIs. STIs negatively affect not only physical health but also psychological and social well-being. They often lead to stigmatization and discrimination, which delays patients from seeking medical care. Therefore, a comprehensive approach in healthcare systems combining diagnosis, treatment, psychological support, and public awareness is

ISSN 2181-3187

essential. Currently, international organizations are implementing large-scale programs to reduce the global spread of STIs. These programs focus on developing new diagnostic tools, producing affordable and accessible medications, and increasing public awareness of prevention. Empirical Analysis. Empirical analysis involves studying the prevalence, clinical manifestations, diagnosis, and treatment effectiveness of STIs based on practical data.

According to WHO data, more than 376 million STI cases are recorded annually worldwide. The most common infections include:

- Gonorrhea: 82 million new cases per year
- Chlamydia: 127 million new cases per year
- Syphilis: 7 million new cases per year
- Trichomoniasis: 156 million new cases per year

In Uzbekistan, there has been a noticeable increase in STI prevalence in recent years. According to the Republican Dermatovenerology Scientific Center, in 2024, gonorrhea cases increased by 15%, and chlamydia cases by 20%. The main reasons include unsafe sexual practices, incomplete vaccination coverage, and insufficient public health awareness.

Clinical Symptoms and Diagnostic Effectiveness. The most common symptoms observed in patients were:

- Genital discharge – 38%
- Itching and redness – 27%
- Pain and burning sensation – 21%
- Ulcers and erosions – 14%

Diagnostic methods effectiveness:

- PCR: 98% sensitivity, 95% accuracy
- ELISA: 85% sensitivity, 90% accuracy
- Culture: 80% sensitivity, 92% accuracy

These results demonstrate the superiority of PCR diagnostics, although its high cost limits widespread use.

ISSN 2181-3187

Treatment Effectiveness. A study involving 200 patients showed:

- Gonorrhea (ceftriaxone + azithromycin): 96% effectiveness
- Chlamydia (doxycycline): 88% effectiveness
- Genital herpes (acyclovir): 90% symptom reduction

Side effects included allergic reactions (5%), gastrointestinal disturbances (8%), and headaches (3%).

Prevention Program Outcomes. A program involving 500 participants showed:

- 67% adopted safe sexual practices
- 54% began regular medical check-ups
- 32% participated in vaccination programs

These results confirm the effectiveness of educational interventions.

Conclusion. Skin and sexually transmitted infections remain a major global health issue. They affect physical, psychological, and social well-being.

As highlighted in the article, gonorrhea, syphilis, chlamydia, and genital herpes are among the most распространенных infections, and their prevalence continues to increase. In Uzbekistan, rising STI rates are linked to poor hygiene, unsafe sexual behavior, and low public awareness. Therefore, improving prevention, diagnostics, and treatment strategies is essential to reduce the burden of these infections and protect public health.

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