

MAIN CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS OF HIV/AIDS PATIENTS

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Resume

HIV infection is one of the most critical public health issues in the world, and it is ranked as such because of its prevalence, socio-economic consequences, absence of specific prevention methods, and the cost of treatment. In Uzbekistan, the prevalence of HIV is rising, and this is the reason why epidemiological surveillance and prevention are critical.

Keywords: HIV infection, AIDS, epidemiology, opportunistic infections, antiretroviral therapy, CD4+ lymphocytes, comorbidity, viral hepatitis, immunodeficiency.

ОСНОВНЫЕ КЛИНИЧЕСКИЕ И ЭПИДЕМИОЛОГИЧЕСКИЕ ХАРАКТЕРИСТИКИ ПАЦИЕНТОВ С ВИЧ/СПИДОМ

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Резюме

ВИЧ-инфекция является одной из наиболее острых проблем общественного здравоохранения в мире, и это обусловлено ее распространенностью, социально-экономическими последствиями, отсутствием специфических методов профилактики и стоимостью лечения. В Узбекистане распространенность ВИЧ растет, и именно поэтому эпидемиологический надзор и профилактика имеют решающее значение.

Ключевые слова: ВИЧ-инфекция, СПИД, эпидемиология, оппортунистические инфекции, антиретровирусная терапия, CD4+ лимфоциты, сопутствующие заболевания, вирусный гепатит, иммунодефицит.

Background:

Human Immunodeficiency Virus (HIV) infection remains one of the most serious global public health challenges due to its continuous spread, high mortality rate, significant socio-economic burden, absence of effective vaccines, and lifelong treatment requirements. Despite advances in antiretroviral therapy, HIV continues to affect millions of people worldwide. In Uzbekistan, the epidemiological situation of HIV infection reflects global trends, with a steady increase in registered cases. Insufficient awareness, late diagnosis, and limited access to preventive services contribute to disease progression and transmission.

Objective:

To conduct a comprehensive clinical and epidemiological analysis of HIV/AIDS patients with special emphasis on opportunistic infections, comorbidities, immunological status, and treatment outcomes based on data from the Samarkand Regional Infectious Diseases Hospital for 2024–2025.

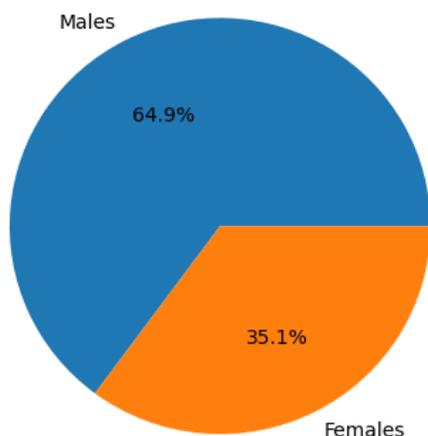
Materials and methods:

A retrospective analysis was performed on medical records of 145 HIV-positive patients hospitalized between 2024 and 2025. All patients underwent detailed clinical examination, laboratory investigations (complete blood count, urine and stool analysis, biochemical profile), serological testing for HIV, hepatitis B and C, and immunological assessment of CD4+ lymphocyte counts. HIV infection was confirmed using ELISA and immunoblot methods. Epidemiological methods, statistical analysis, territorial ranking, and clinical-diagnostic evaluation were applied to assess disease distribution and progression. The diagnosis of HIV infection and opportunistic diseases was established according to international classification standards.

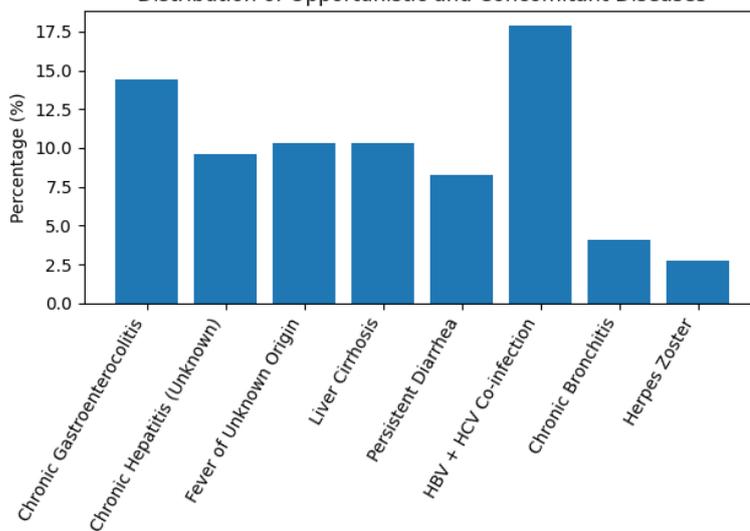
Results and discussion:

The study population consisted of 94 males (64.8%) and 51 females (35.1%). Urban residents accounted for 58.6%, while rural residents comprised 55.1%. The highest prevalence was observed among patients aged 40–50 years (44.1%), indicating increased vulnerability in economically active populations.

Gender Distribution of HIV Patients



Distribution of Opportunistic and Concomitant Diseases



All patients presented with fever and asthenic syndrome. Lymphadenopathy was detected in 97.2%, hepatosplenomegaly in 47.5%, and chronic fatigue in 87.5% of cases. Weight deficit exceeding 10% was found in 53.1% of patients, reflecting advanced disease stages. Severe cachexia was observed in 11.2%. Immunological assessment revealed reduced CD4+ lymphocyte counts in all patients, with 26.8% showing severe immunosuppression (<510 cells/ml). Hematological disorders were common: mild anemia was detected in 44.8%, moderate in 39.3%, and severe in 15.8% of patients. Opportunistic and concomitant diseases were frequently observed, including chronic gastroenterocolitis (14.4%), chronic hepatitis of unknown etiology (9.6%), fever of unknown origin (10.3%), liver cirrhosis (10.3%), persistent diarrhea (8.27%), viral hepatitis B and C co-infection (17.9%), chronic bronchitis (4.1%), and herpes zoster (2.75%). Among the patients, 73 received antiretroviral therapy, mainly

based on lamivudine-containing regimens. Treatment resulted in clinical improvement in most cases: 87.5% of patients were discharged in satisfactory condition.

The predominance of middle-aged males indicates the role of social, behavioral, and occupational factors in HIV transmission. Late hospital admission, advanced immunodeficiency, and high prevalence of opportunistic infections highlight insufficient early detection and preventive measures. Co-infection with viral hepatitis significantly worsens prognosis and increases the risk of liver complications.

Conclusion:

HIV infection in the Samarkand region is characterized by late diagnosis, advanced clinical stages, and frequent comorbidities. Strengthening screening programs, improving public awareness, expanding access to ART, and implementing targeted prevention strategies are essential to reduce morbidity and mortality.

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