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**ТИББИЁТДА ЯНГИ КУН  
НОВЫЙ ДЕНЬ В МЕДИЦИНЕ  
NEW DAY IN MEDICINE**

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## CLINICAL FEATURES OF EPILEPSY IN PATIENTS WITH HUMAN IMMUNODEFICIENCY VIRUS INFECTION

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### ✓ Resume

*Human immunodeficiency virus (HIV) infection is one of the most urgent medical and social problems of our time. The article considers possible combinations of HIV infection and epilepsy, the causes of these conditions, the features of their diagnosis and treatment. An analysis was made of HIV-infected patients in the register of an epileptologist.*

*Keywords: HIV infection, human immunodeficiency virus, acquired immunodeficiency syndrome, epilepsy, seizures, comorbidity, leukoencephalopathy, toxoplasmosis.*

## КЛИНИЧЕСКИЕ ОСОБЕННОСТИ ЭПИЛЕПСИИ У БОЛЬНЫХ ИНФЕКЦИЕЙ ВИРУСНОГО ИММУНОДЕФИЦИТА ЧЕЛОВЕКА

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### ✓ Резюме

*Инфицирование вирусом иммунодефицита человека (ВИЧ) является одной из актуальнейших медико-социальных проблем современности. В статье рассмотрены возможные сочетания ВИЧ-инфекции и эпилепсии, причины этих состояний, особенности их диагностики и лечения. Проведен анализ ВИЧ-инфицированных больных, состоящих на учете у epileptолога.*

*Ключевые слова: ВИЧ-инфекция, вирус иммунодефицита человека, синдром приобретенного иммунодефицита, эпилепсия, судороги, коморбидность, лейкоэнцефалопатия, токсоплазмоз.*

## ODAM IMMUN TANQISLIGI VIRUSLI INFEKSIYASI BO`LGANBEMORLARDA EPILEPSIYANING KLINIK XUSUSIYATLARI

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### ✓ Rezyume

*Odam immun tanqisligi virusi (OIV) bilan kasallanish bizning davrimizning eng dolzarb tibbiy va ijtimoiy muammolaridan biridir. Maqolada OIV infektsiyasi va epilepsiyaning mumkin bo'lgan kombinatsiyasi, ushbu holatlarning sabablari, ularni tashxislash va davolash xususiyatlari ko'rib chiqiladi. Epileptologda ro'yxatga olingan OIV infektsiyasi bilan kasallangan bemorlar tahlil qilingan va ularning o'ziga xos xususiyatlari yoritilgan.*

*Kalit so'zlar: OIV infektsiyasi, odam immun tanqisligi virusi, orttirilgan immunitet tanqisligi sindromi, epilepsiya, konvulsiyalar, qo'shma kasalliklar, leykoensefalopatiya, toksoplazmoz.*

### Relevance

To date, it is estimated world health organizations (WHO) and the Joint United Nations Program on HIV/AIDS (UNAIDS), more than 60 million people have been infected with HIV worldwide. HIV infection has become a pandemic. Uzbekistan and the Bukhara Region in particular are territories with high spread of HIV infection among the population. In this regard, a doctor of any specialty can see an HIV-infected patient. Including a neurologist-epileptologist, since one of the targets for the human immunodeficiency virus is the nervous system. It is known that only every 10,000th lymphocyte in the peripheral blood of patients infected with HIV is infected with the virus, while in the brain tissue HIV infects every hundredth cell. Neurological complications of HIV infection can be caused both by the retrovirus itself and by opportunistic infections, cerebrovascular pathology, tumors, and toxic effects of antiretroviral drugs [1, 2, 3, 7].

Epileptic seizures occur on average in 6% of HIV-infected people [5, 8]. The causes of seizures in patients with HIV infection are various, among them: toxoplasmosis, CNS lymphoma, cryptococcal or tuberculous meningitis and progressive multifocal leukoencephalopathy (HIV-associated leukoencephalopathy).

**Goals and objectives.** The objectives of the study were: to identify the causes of epilepsy in patients with HIV infection explore features of the course of epilepsy in HIV-infected people, comorbidity these diseases define peculiarities diagnostics epilepsy at HIV infected reflect the characteristics of the treatment of such patients.

The objectives of the study were to identify HIV-infected patients in the register of an epileptologist, to analyze the data obtained.

### Materials and methods

The study retrospectively assessed HIV-infected patients registered with a neurologist-epileptologist in the office for receiving patients with epilepsy and paroxysmal conditions of the Psychiatric Hospital of Bukhara.

**Table 1**

**Age and sex composition of HIV-infected patients with epilepsy and acute symptomatic epileptic seizures**

	Men	Women
25-30 years old	2	0
30-40 years old	12	4
Over 40 years	7	0
Total	21	4

Since 1990, the office has been accepting patients from the Central, Romitan, Gijduvan and Shafirkan districts of Bukhara. According to the registry, among 2512 patients with epilepsy, about 1% are HIV-infected, in absolute numbers 25 people. Most of them have been identified over the past 4 years, which indicates an increase in the rate of infection spread and the development of its complications.

**Table 2. Types of epileptic seizures in HIV-infected patients**

	Acute symptomatic attack	focal epilepsy
Focal (sensory, motor) seizures	-	3 patients
Secondary generalized seizures	2 patients	7 patients
Focal And secondary generalized seizures	-	13 patients

According to the sex composition, men predominated among the patients, according to the age composition - patients of the group of 30-40 years.

Among the presented patients, 2 suffered from acute symptomatic seizures associated with alcohol withdrawal, the remaining 23 patients-structural-metabolic and symptomatic forms of focal epilepsy. The predominant type of seizures were secondary generalized, that is, the most severe and often serial seizures (7 patients), detailed data are presented in table 2.

The majority of patients (18 people - 72%) are disabled of II-III groups, which indicates O-gravity and disabling character these diseases. In the neurological status, 7 patients have hemiparesis of I-II degree, 9 patients have pyramidal insufficiency and cognitive impairment, 3 patients have a mental illness disability group due to severe cognitive impairment.

Out of 25 patients: 12 (48%) knew their HIV-positive status before visiting a neurologist, in 7 (28%) patients the diagnosis was clarified at hospitalizations V neurosurgical hospital for severe traumatic brain injury, in 6 (24%) patients HIV infection was diagnosed after the development of neurological complications (epileptic seizures, movement disorders). Seizures occurred before the diagnosis of HIV infection in 17 (68%) patients, and after the infection was diagnosed in 8 (32%) patients. During hospitalization in the neurological hospital patients required often long diagnostic search for diagnosis toxoplasmosis and HIV associated leukoencephalopathy (wide circle laboratory, instrumental studies, consultations of various specialists, MRI in dynamics).

When analyzing the etiology of epileptic seizures, the following causes were identified, which are indicated in Table 3.

**Table 3**  
**Causes of epileptic seizures in patients with HIV infection**

Combination of TBI and toxic cause	2
Toxoplasmosis	1
Arterioveus malformation	1
Caverus angioma	1
Cryptogenic (cause unkwn)	2
Acute symptomatic attack on alcohol withdrawal	2
Total	25

In addition to HIV infection, the studied patients had other comorbid diseases: infectious (hepatitis B and C, tuberculosis, syphilis, etc.) and n-infectious (alcoholism and drug addiction).

**Table 4**  
**Comorbid diseases in HIV-infected patients with epileptic seizures**

Cause	Number of patients
Hepatitis B	3
Hepatitis C	19
Tuberculosis	4
Syphilis	1
Chronic alcoholism	eleven
Addiction	15
HIV-associated leukoencephalopathy	7
Heavy craniocerebral Injury	6
Toxic (chr. alcoholism, drug addiction)	3

Taking into account severe concomitant diseases, the features of the selection of anticonvulsant therapy. Many patients were prescribed drugs that in their metabolism do not affect the enzymes of the cytochrome P-450 system, since the patients had liver damage. A number of patients required combination therapy to achieve remission. 8 patients were taking carbamazepine, 6 patients were on oxcarbazepine (trileptal), 4 patients were on topiramate, 1 was on levetiracetam, 1 was on pregabalin, 3-combination therapy (trileptal + levetiracetam), 2 - treatment.

### Result and discussion

The group of patients with epileptic seizures and HIV infection is predominantly male and of working age. Due to the existing severe motor and cognitive impairments, most patients are disabled. Of the 25 patients with HIV infection in the epileptologist's registry, two patients had acute symptomatic attacks, 23 suffered from focal epilepsy. The causes of epileptic seizures in these patients are different, including 8 patients who developed epilepsy as a complication of HIV infection in the central nervous system, among which HIV-associated leukoencephalopathy was the most common - 7 patients, and 1 patient had toxoplasmosis. These data are consistent with the results of foreign researchers [4, 5, 6]. Taking into account the difficulty of diagnosing these conditions, it is necessary to remember about the clinical features of these complications, characteristic changes during neuroimaging.

### Conclusion

Epilepsy and epileptic Seizures are a formidable, often disabling complication of HIV infection. Timely diagnostics diseases and good patient compliance allow reach medical remissions epilepsy (seizures for more than 12 months).

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