

## TUBERCULOSIS OF GENITALS IN HIV-INFECTED WOMEN

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**Abstract.** *It was analyses of autopsies and postoperative materials from women, who died with HIV-infection and tuberculosis. The research of the autopsies material from died women with HIV-infection and tuberculosis revealed the tuberculosis of genital organs in 13 cases from 30; in postoperative materials revealed the tuberculosis of genital organs in 5 cases from 30. The anamnesis of all patients has uterus myoma and dysfunctional bleeding from uterus. The obligatory research of the postoperative biopsy material gives gynecologists a chance to diagnose the tuberculosis of genital organs for effective specific chemotherapy, which is crucial for a favorable outcome.*

**Key words:** *HIV-infection, tuberculosis, female genital organs.*

Among the female population, tuberculosis is the most common cause of death from infectious diseases. So, in the world die from tuberculosis each year more than 1 million. Many of women are of childbearing age [2]. Violations of immune protection at the level of endometrial lead to increased incidence of inflammatory diseases of the pelvic organs in women with HIV infection [6]. By 2000, developing countries, HIV infection was the third leading cause of death in adults (after tuberculosis and other infections). In Africa 50% of all deaths associated with HIV. In the USA, HIV infection is the leading cause of death among African-American women and the third leading cause of all women. The fastest rate of new infections is increasing among women:

- HIV is more easily transmitted from men to women (2 times).
- Do young women tissue of the vagina and cervix more vulnerable.
- Women more frequently asymptomatic of sexually transmitted infections for which treatment is not carried out.
- Women are less controlled circumstances connected with the peculiarities of sexual life (using a condom).

We know that immunocompromised HIV-infected women often suffer from gynecological diseases than HIV-negative women. Among the extrapulmonary tuberculosis female genital mutilation has a special position. Genital tuberculosis is

caused by *Mycobacterium tuberculosis* and is not an independent disease, but a manifestation of tuberculous infection of the body. Defeat occurs secondarily genital organs, resulting in introduction of infection mostly hematogenous route, usually from lung, gut and rarely from other chambers. *Mycobacterium tuberculosis* can long exist in the regional lymph nodes and show the ability to spread at lower immunological resistance. The specificity of the disease dictates the need to address not only medical but also social problems in women of reproductive age (61.7% of patients younger than 30 years) [1]. Tubercular lesion of genitals, in addition to significant morphological changes, leading to severe functional impairment, requires not only chemotherapy, and surgical correction.

The main disorders in patients is the loss of the ability to reproduce, that is primary infertility (85%). The causes of infertility are due to either obstruction of the fallopian tubes, or changes in the ovaries. Prolonged inflammation in the uterine appendages sclerocystic ovary undergoes changes, which leads to disruption of menstrual and reproductive function. The majority of patients with tuberculosis genitals menstrual function is the type of anovulatory cycles. Patients with tuberculosis genitals often (15%) suffer predmentsrualnym syndrome.

The frequency of functional disorders may be associated not only with the activity of tuberculous process, but also with long-term treatment antibacterial drugs that can have toxic effects and reduce the level of steroid hormones.

The ability to restore the function of the genitals as a menstrual and fertility depends on the morphological changes and the degree of severity. The involvement of the body of the uterus and appendages, usually leads to irreversible changes. In this situation, you can count only on an attempt to restore or maintain the menstrual function.

The clinical picture of tuberculosis of female genital mutilation is different polymorphism and determined by the activity of inflammation (acute, subacute, and chronic), the degree of dissemination of the process (infiltration, suppuration, resorption, scarring, calcification), as well as its localization. Mostly tuberculosis affects the fallopian tubes in 100%, 40-60% in the uterus, ovaries in 18-23%, cervix -

3.9% and the vagina - in 3.1% of cases [3,5]. Diagnosis of tuberculosis female genital mutilation often presents considerable difficulties. Always has been suggested even the impossibility of diagnosis of tuberculosis of female genitals in the early stages of the development process [1].

In the first stage detection of tuberculosis of female genital mutilation takes place in the women's clinic. Gynecologist forms "at risk" among patients suffering from chronic inflammation of the uterus, menstrual dysfunction, endometriosis genitalia. A special group of women who underwent extragenital form of tuberculosis (tuberculosis of the lungs, spine, bones and joints, and the urinary organs and limfoabdominal).

The most accurate information about tuberculosis female genitals gives pathomorphologic method by which you can explore a material obtained from the uterus (separation, aspirate, or scraping the uterine cavity mucosa), that is -diagnose tuberculous endometritis. Diagnostic curettage of the mucous membrane of the uterus performed for 1 - 2 days before the onset of menstruation. The resulting material is sent simultaneously on histological, cytological and bacteriological examination.

Bacteriological studies, as well as histological, are reliable methods for diagnosis of tuberculosis of female genital mutilation. Bacteriological research exposed aspirate or scraping the mucous membrane of the uterus, the operational material, fluid of ascites, discharge from the uterus and vagina. To improve the effectiveness of the research carried out repeatedly. The cause of diagnostic errors may be organizational issues related to lack of vigilance of general health care services for the diagnosis and detection of such patients.

**Aim:** focusing gynecologists and pathologists in the diagnosis, morphology and treatment of patients, including HIV-positive women with tuberculous lesion of the genitals.

**Materials and methods.** We have studied autopsy (uterus with the cervix and appendages) from deceased HIV-infected women with a history of tuberculosis - 30 cases and postoperative material (scrapings of the uterine cavity and cervical canal with dysfunctional uterine bleeding, uterine and amputated appendages) of

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gynecological patients HIV infected women suffering from tuberculosis - 30 cases. The average age of the deceased was 33 years. Almost all the dead were intravenous drug addicts. A statement of fact HIV was carried out in the laboratory of the AIDS Centre by enzyme immunoassay and immunoblotting confirmed twice. The diagnosis of tuberculosis in those who died of HIV-infected women was exposed in vivo in 20 cases out of 30, and the method of bacteriological sputum microscopy, and posthumously was diagnosed with us - tubercular inflammation of the genital organs in 13 cases out of 30.

**The results of the study and discussion.** Our results are almost identical to those of other authors [1, 4]. According to the research of autopsy material from deceased HIV-positive women - in 13 cases out of 30, we found running tubercular inflammation of the genital organs: 6-x cases tubercular endometritis (a in 5 cases productive form with the formation of disseminated tubercles in the endometrium and in 1 case - caseose necrosys of the transition to the muscular layer), in 3 cases the tubercular pelvioperitonit, in 4 cases, tuberculous salpingitis. In one of 13 cases it has been a combination of all these lesions genitals tuberculosis: tuberculous endometritis with caseose necrosys, bilateral tuberculous salpingitis and diffuse tubercular pelvioperitonites. Despite the fact that the clinical diagnosis of tuberculosis of different localization was exposed during the life of the deceased at the 20 HIV-infected tuberculous lesion of genitals was not suspected in any case (pathologists diagnosed in 13 cases at autopsy).

Productive forms of tuberculous endometritis occurs most often. The tuberculous endometritis occurs, usually without clinical manifestations. The main complaint of patients - menstrual dysfunction. With the defeat of the myometrium body of the uterus may be increased "like" 5-6 weeks of pregnancy. Exudative pelvioperitonitis proceeds with just noticeable clinical manifestations. Adhesive form of the disease characterized by high fever, abdominal pain, severe diarrhea disorders and intoxication. When present caseous form of pelvioperitonitis noted severe disease, with the formation of caseous foci in the pelvic and abdominal cavity.

When analyzing the postoperative material from HIV-infected women identified us tubercular process in the genital organs in 5 cases out of 30, namely, in 4 cases, tuberculous salpingitis, in 2 cases of tuberculous endometritis. All patients complained of menstrual disorders, pain in the lower abdomen, intermittent fever. They were performed surgery to remove the uterus, with a clinical diagnosis of purulent salpingo-oophoritis, as well as amputation of body supravaginal cancer in women with a clinical diagnosis - dysfunctional uterine bleeding, mioma of uterus.

The causative agent of tuberculosis and association immunodeficiency virus called "cursed duet". In HIV-infected patients with tuberculosis presence provokes rapid development of end-stage HIV, the presence of disseminated forms of tuberculosis. However, extrapulmonary tuberculosis in HIV-infected practically not diagnosed (mainly at autopsy). Perhaps this is due to the low information content of bacteriological methods of investigation in this group of patients, suppression of skin tuberculin test and lack of widespread use of alternative (cytological, immunohistochemical, immunological, genetic) research methods.

**Conclusions:** 1. In a large cohort of patients with genital tuberculosis there is a mismatch between the clinical manifestations of the disease and the severity of anatomic lesions.

2. Diagnosis of tuberculosis of female genital mutilation is based on details collected history, clinical course of the disease, gynecological examinations. To confirm the diagnosis using an improved sample Koch crop discharge from the genital tract, menstrual blood on Mycobacterium tuberculosis and diagnostic curettage of the uterus, followed by 100% histological (biopsy material and post-operative) and microbiological research material, data, radiological and endoscopic methods.

3. If any biopsy material or postoperative tuberculosis, morphology should emphasize the need for the operating gynecologist examination of the patient for HIV antibodies. In everyday practice, gynecologists and pathologists must have continuity in the work.

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### **Туберкульоз статевих органів у ВІЛ-інфікованих жінок.**

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**Резюме.** Досліджено аутопсійний та післяопераційний матеріал від ВІЛ-інфікованих жінок, хворих на туберкульоз. При дослідженні аутопсійного матеріалу від померлих ВІЛ-інфікованих жінок, що хворіли на туберкульоз в 13 випадках із 30 діагностовано туберкульоз статевих органів; у післяопераційному матеріалі в 5 випадках з 30 виявлено туберкульоз статевих органів. В анамнезі у всіх ВІЛ-інфікованих жінок міома матки та дисфункційна маткова кровотеча. Обов'язкове дослідження післяопераційного та біопсійного матеріалу дає можливість гінекологам виявити туберкульоз статевих органів для подальшого проведення ефективної протитуберкульозної хіміотерапії хворих, що є запорукою сприятливого результату.

**Ключові слова:** ВІЛ-інфекція, туберкульоз, жіночі статеві органи.

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### **Туберкулёз половых органов у ВИЧ-инфицированных женщин.**

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**Резюме.** Исследован аутопсийный и послеоперационный материал от ВИЧ-инфицированных женщин, болевших туберкулёзом. При исследовании аутопсийного материала от умерших ВИЧ-инфицированных женщин, болевших туберкулёзом в 13 случаях из 30 диагностирован туберкулёз половых органов; в послеоперационном материале в 5 случаях из 30 выявлен туберкулёз половых органов. В анамнезе у всех ВИЧ-инфицированных женщин миома матки, дисфункциональное маточное кровотечение. Обязательное исследование послеоперационного и биопсийного материала даёт возможность гинекологам выявить туберкулёз половых органов для дальнейшего проведения эффективная протитуберкулезная химиотерапия больных, что является залогом благоприятного исхода.

**Ключевые слова:** ВИЧ-инфекция, туберкулёз, женские половые органы.

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