

An Atypical Case of Leishmaniasis with  
HIV Co-InfectionAzizov BS<sup>1\*</sup>, Nabiev FH<sup>3</sup> and Karimova MK<sup>2</sup><sup>1</sup>Tashkent State Dental Institute, Uzbekistan<sup>2</sup>Tashkent Medical Academy, Uzbekistan<sup>3</sup>Scientific research institute of virology of Ministry of Health of Republic of Uzbekistan, Uzbekistan

## Article Information

Received date: Nov 06, 2017

Accepted date: Dec 25, 2017

Published date: Dec 29, 2017

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CC-BY 4.0Keywords Cutaneous leishmaniasis;  
HIV-infected people; *Leishmaniatropica*

## Abstract

An article describes an atypical case of rural type of cutaneous leishmaniasis at the HIV-infected patient, clinical stage 4. There is no case, described in literature until this day, when the clinical presentation of rural type of cutaneous leishmaniasis extended for year and half. According to authors, the length and severity of disease's progression is caused with HIV-co-infection and a secondary bacterial infection-accompanying pathological process.

## Introduction

HIV infection is severe infectious disease that leads to death, and tends to have pandemic spread. By early 2006, according to the World Health Organization and the United Nations AIDS Program, virus affected about 50 million people. It is estimated that there are 28 million AIDS-related deaths worldwide, and number of daily infected with HIV - 16,000.

A significant feature of HIV infection is the polyethiologic nature of developing secondary diseases and polyorganism of damage.

The defeat of the skin and mucous membranes in most patients is one of the first signs of the disease. Most dermatologic lesions, caused by one or another pathogen, progress severely and do not respond to traditional treatment. Because of developing immunodeficiency, various skin lesions occur in HIV-infected people, most often viral, bacterial, fungal, parasitic origin.

In HIV-infected patients suffers the immune system, in particular, the function of CD4+ lymphocytes and macrophages, which protects the macro-organism from facultative and obligate intracellular and extracellular parasites, bacteria, protozoa, fungi, viruses [1].

The clinical and epidemiological aspects of concomitant diseases of the skin and mucous membranes in HIV infected people are widely studied in the world [1].

Investigations showed that the majority of cutaneous disorders caused by certain pathogen, with an unknown origin, are very "violent", and do not respond to traditional treatment. According to recommendations, etiotropic treatment of patients is prescribed in big, sometimes toxic doses, which in turn also suppresses immune and interferon system. Along with viral, fungal infections, associated with HIV, there are bacterial infections and diseases caused by protozoa including skin leishmaniasis [2]. Cutaneous leishmaniasis (Borovsky's disease) is caused by the pathogen *Leishmaniatropica*, which is transmitted to humans and several animal species, through the bite of mosquitoes *Phlebotomus papatasi*. The clinical manifestation of disease is very diverse. The incubation period lasts from 2 to 16 weeks, there appear red colored nodules on the place of introduction of the pathogen, which subsequently ulcerate. Nodules are infiltrated; they form an ulcer with rough edges and a granular bottom. There are two main forms of cutaneous leishmaniasis-zoonotic, or acute necrotizing (ectimatus). Rural type lasts from 2 to 4 months, resolved by scarring. The second type-anthropous or late necrotic, urban type lasts from 4 to 12 months or more. In the last 20-30 years, the urban type of leishmaniasis in Uzbekistan has been eliminated [3,4].

In this case, for the first time, we present an atypical long-term course of cutaneous leishmaniasis in HIV / AIDS patient.

## Case Report

46 years old, female patient, a resident of the Termez city, Surkhandarya region, was admitted to the inpatient department of the Research Institute of Virology of the Academy of Sciences of the Republic of Uzbekistan on June 23, 2008 with the diagnosis of HIV infection, clinical stage 4. HIV infection was detected in the AIDS center of Surkhandarya region on February 29, 2008. Before that, she had been outpatient for a few months, major clinical signs were diarrhea of unknown etiology and complaints of an increase of body temperature (37-38.5°C), as well as coin-like ulcers



**Figure 1:** Female patient, 46 years old. Ds: HIV infection, clinical stage 4, concomitant - cutaneous leishmaniasis, a rural type complicated by secondary bacterial infection. Before and during treatment.

in the skin of the shoulder and forearm. After the detection of HIV infection and symptomatic treatment of the patient, with no positive dynamics, the patient was referred for inpatient treatment at the Virology Research Institute of the Academy of Sciences of Uzbekistan with HIV infection, chronic cholecystitis, and HIV encephalopathy). In the inpatient department of the Virology Research Institute, the patient is diagnosed with HIV, clinical stage 4, cachexia, rural type of cutaneous leishmaniasis, persistent fever and diarrhea of unknown etiology, oral candidiasis, concomitant diagnosis – anemia stage I, chronic hepatocholecystitis, chronic pyelonephritis. According to the patient, it was found out that ulcers on her hand appeared in July 2007. At the site of the mosquito bite appeared red macule, which gradually increased, reaching the size of a pea and ulcerated within two months. The patient did not examine the doctors, independently applied antiseptic liquor on the lesions. Within 2-3 weeks ulcers increased in the periphery and acquired the current size.

On physical examination, the cutaneous pathological process is widespread, asymmetric, chronic, localized on the skin of the hand and forearm. Elements of lesions are various sized ulcers, from 3 cm to 5 cm in diameter. On the back surface of the right palm - 4 cm in diameter, round in shape; at the basement of the first finger - 4 cm in diameter, oval in shape; on the lateral surface of the forearm skin - 2 cm in diameter; on the skin of the elbow joint, 5 cm in diameter, round in shape. Ulcers are covered with a thick layer of pustularscurfs, turning into a crust in some places. The edges of the ulcers are sharp, hyperemic. Visual examination and palpation show infiltrated cords around ulcers, a symptom of “beads”, and enlargement of the lymph nodes (regional lymphangitis and lymphadenitis), curettage of pustularscurfs, the bottom of the ulcer, covered with a granular tissue, is a symptom of “fish eggs” (Figure 1).

Laboratory data at the time of admission shows Complete blood count - Hemoglobin 92 g/L, RBC- $3.3 \times 10^{12}/L$ , WBC- $8.5 \times 10^9/L$ , Lymphocytes- $3.7 \times 10^9/L$ , eosinophiles-5%, Esr- 47 mm/hour.

The test of the fingerprint from the surface of ulcers revealed the presence of Borowski corpuscles - *Leishmaniatropica* major, of the rural type. Microscopy of pustularscurfs showed the presence of streptococcal and staphylococcal bacteria and yeast fungi of *Candida*. Test for antibiotic sensitivity, showed response to Ceftriaxone, Doxycycline, Sumamed and Rifampicin. Indicators of CD 4 - 62  $mm^3$  from July 1, 2008 and 287  $mm^3$  from August 8, 2008 respectively.

For the HIV infection has been started ARVT, in addition treatment included- Sol. Dimedroli 1% -1.0 ml, Sol. Calciigluconati 10% -10.0 ml, Cp. Fungikare 50 mg – No. 7, Sol. Ceftriaxoni 1,0- No. 10 i/m twice a day, Tab. Doxycyclini 0.1- No. 20 x 1 tab. twice a day. Topically - antiseptic liquid 3-4 times a day, Oint. Levomycetini x 2 times a day [5].

In process of treatment the surface of the ulcers pured from the pustular necrotic mass, on 12<sup>th</sup> day after initiation of treatment. On the 14<sup>th</sup> day of treatment the marginal inflammatory halo began to resolve, the granulation increased.

The patient checked out from in-patient department of the Virology Research Institute for further HIV / AIDS treatment at the AIDS center in the place of residence. At the time of checking out from the hospital, there was an improvement in the pathological process on the skin.

## Conclusion

Thus, in this case, we see that in AIDS patients the duration of cutaneous leishmaniasis does not fit within the typical course of disease, the improvement of the pathological process begins 12-15 days later, whereas in individuals without HIV infection, the positive dynamics, on average, is observed on 4-5 days from start of the therapy. Commencement of treatment should take into account the sensitivity to antibiotics of the bacterial flora in the lesion.

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