An Atypical Case of Leishmaniasis with HIV Co-Infection

Azizov BS^{1*}, Nabiev FH² and Karimova MK³

¹Department of Dentistry, Tashkent State Dental Institute, Uzbekistan

²Scientific Research Institute of Virology of Ministry of Health, Republic of Uzbekistan

³Tashkent Medical Academy, Tashkent, Uzbekistan

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, (PubMed, Google, Medline, ResearchGate) 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 the pathological process.

Keywords: Cutaneous leishmaniasis; HIV-infected patient; Bacterial infection

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 is approximately 16,000.

A significant feature of HIV infection is the polyetiological nature of developing secondary diseases and poly-organism of damage [1]. 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 and parasitic origin [2].

In HIV-infected patients, the immune system suffers 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 and viruses [3-6].

The clinical and epidemiological aspects of concomitant diseases of the skin and mucous membranes in HIV infected people are widely studied in the world [7]. 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 strong, sometimes toxic doses. In turn, it 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 [4]. Cutaneous leishmaniasis (Borovsky's disease) is caused by the pathogen *Leishmania tropica*, which is transmitted to humans and several animal species, through the bite of sand fly *Phlebotomus papatasi*. The clinical manifestation of the disease is very diverse. The incubation period lasts from 2 to 16 weeks. Red coloured nodules appear on the place of introduction of the pathogen, which subsequently ulcerate. Infiltrated nodules form ulcers with rough edges and a granular bottom. There are two main forms of cutaneous leishmaniasis-zoonotic, or acute necrotizing. 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 [5,6].

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

Case Report

A 46-year-old, female patient 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 on February 29, 2008. Before that, she was outpatient for a few months, major clinical signs were diarrhea of unknown etiology and complaints of an increase of body temperature (37°C-38.5°C), as well as coin-like ulcers on 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, HIV encephalopathy. In the inpatient department of the Virology Research Institute, the patient was diagnosed with HIV clinical stage 4, cachexia, rural type of cutaneous leishmaniasis, persistent fever and diarrhea of unknown etiology and oral candidiasis. Concomitant diagnosis was anemia stage I, chronic hepatocholecystitis and chronic pyelonephritis. According to the patient, the ulcers on her hand appeared in July 2007. At the site of the sand fly 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 medicine on the lesions. Within 2-3 weeks ulcers increased in the periphery and acquired the current size.

On physical examination, the cutaneous pathological process was widespread, asymmetric, chronic, localized on the skin of the hand and forearm. Elements of lesions were various sized ulcers, from 3 cm to 5 cm in diameter. On the back surface of the right palm 4 cm in diameter and round in shape, at the basement of the first finger 4 cm in diameter

***Corresponding author:** Azizov BS, Department of Dentistry, Tashkent State Dental Institute, Street Maxtumkuli, Tashkent, Uzbekistan, Tel: +998 71 150 78 25; E-mail: dr.azizov@rambler.ru

Received: November 06, 2017; **Accepted:** December 06, 2017; **Published:** December 12, 2017

Citation: Azizov BS, Nabiev FH, Karimova MK (2017) An Atypical Case of Leishmaniasis with HIV Co-Infection. Dermatol Case Rep 2: 134

Copyright: © 2017 Azizov BS, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Figure 1: Female patient, 46-years-old. Ds: HIV infection, clinical stage 4, concomitant-cutaneous leishmaniasis, a rural type complicated by secondary bacterial infection. a) Before treatment, b) Two weeks after treatment.

and 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 and round in shape. Ulcers were covered with a thick layer of pustular scurfs, turning into a crust in some places. The edges of the ulcers were sharp, hyperemic. Visual examination and palpation showed infiltrated cords around ulcers, a symptom of “beads”, and enlargement of the lymph nodes (regional lymphangitis and lymphadenitis), curettage of pustular scurfs, the bottom of the ulcer, was covered with a granular tissue, a symptom of “fish eggs” (Figures 1a and 1b).

Laboratory data at the time of admission showed

Complete blood count: Haemoglobin 92 g/L

RBC: $3.3 \times 10^{12}/L$

WBC: $8.5 \times 10^9/L$

Lymphocytes: $3.7 \times 10^9/L$

Eosinophils: 5%

Esr: 47 MM/hour

The test of the fingerprint from the surface of ulcers revealed the presence of Borowski corpuscles - *Leishmania tropica major*, of the rural type. Microscopy of pustular scurfs 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 CD4, 62 mm³ from July 1, 2008 and 287 mm³ from August 8, 2008 respectively. For the HIV infection antiretroviral therapy (ARVT) was started, in addition treatment included, Sol Dimedroli 1%-1.0 ml, Sol Calcii gluconati 10%-10.0 ml, Cp. Fungikare 50 mg-№7, Sol. Ceftriaxoni 1,0-№10 i/m twice a day, Tab. Doxycyclini 0.1-№ 20x 1 tab, twice a day. Topical antiseptic liquid 3-4 times a day, Oint. Levomycetini 2 times a day.

Discussion

In the process of treatment, the surface of the ulcers healed from the pustular necrotic mass in 10 days after initiation of treatment. Within 2 weeks of treatment the marginal inflammatory halo began to resolve, the granulation increased. Lesions shrank in size from 0.5 cm to 1 cm.

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

In this case, we see that in HIV 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 consider the sensitivity to antibiotics of the bacterial flora in the lesion.

References

1. Budavari JM, Graysin W (2007) Popular follicular eruptions in human immunodeficiency virus- positive patients in South Africa. *Int J Dermatol* 46:706-710.
2. Tangie LN, Desmond A, Aminde LN, Ako AM, Halle PM (2017) Cutaneous leishmaniasis in a severely immunocompromised HIV patient in Kumbo, Northwest region of Cameroon: Case report. *BMC Res Notes* 10: 425.
3. Alyavi SF (2003) Clinical experimental substantiation of the use of Leishmitsin ointment in patients with cutaneous leishmaniasis. Author's abstract. Thesis Ph.D. Tashkent, Uzbekistan.
4. Nurtaev KS, Badalova NS, Zaliyeva MV, Osipova SO (2005) Intestinal parasitic diseases in HIV-infected patients in Uzbekistan. *Med Parazitol* 3: 45-49.
5. Vaisov AS (1977) The use of collagen monomycin complex in the treatment of acute necrotizing cutaneous leishmaniasis (Borovsky's disease). Author's abstract. Thesis Ph.D. Tashkent, Uzbekistan.
6. Gitelzon II (1993) Cutaneous leishmaniasis. Ashgabat, Turkmenistan.
7. Shinaev NN (2002) Diseases of the skin and mucous membranes as manifestations of AIDS in Africans. Moscow. *Herald of Dermatology and Venereology* No. 3.