Original Article

HIV-ASSOCIATED SARCOMA KAPOSI WITH DISTAL ONYCHOMYCOSIS

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Summary

The case presented is a 58-year-old heterosexual man with HIV-associated Kaposi sarcoma, B-cell lymphoma, hepatitis C, mucosal candidiasis and distal subungual onychomycosis.

Key words: onychomycosis, HIV, Kaposi sarcoma

Introduction

Acquired Immune Deficiency Syndrome (AIDS) is the final stage in the evolution of an infectious process in humans, caused by the Human Immunodeficiency Virus (HIV). It causes damage to the cell-mediated immunity, and as a result there appear opportunistic infections and neoplasias with poor prognoses. These infections occur and develop in parallel with the clinical progress of advanced HIV infection, and are typical of the clinical category C (< 200 CD4 cells/mm^3) according to the CDC classification system of HIV (KK Holmes et al., 1999). They occur in 25-65% of the patients and the outcome is lethal.

Case presentation

The case presented here is a 58-year-old heterosexual man, who had worked in Africa for 8 years as a baker. He was diagnosed as HIV (+) in November 2007 in South Africa. In January 2008, the patient was admitted to the Clinic of Infectious diseases in Sofia, Bulgaria with advanced immune deficiency (169 CD4 cells/mm^3) and lymphoma. The histopathologic and immunohistochemical (CD20) examinations of a biopsy sample from a lymph node proved the existence of a diffuse large B-cell non-Hodgkin's lymphoma. The AIDS diagnosis was confirmed. Treatment with Sumamed® (Azithromycin) and Trizivir®(abacavir sulfate, lamivudine, zidovudine) was administered. The patient was referred to Department of Infectious Diseases of University Hospital-Pleven.

The clinical examination revealed a bradypsychic man in poor general health, with obvious

signs of consumption and generalized lymphadenomegaly and hepatomegaly. Large rounded tumor formations of cartilage density could be felt on palpating the abdominal area.

The pathologic dermatological changes were presented by erythematous livid macules and plaques on the hard palate mucous membrane. On the upper and lateral parts of the tongue there were erosive lesions covered with yellowish-brown dense coatings (Fig. 1). No visceral localizations of Kaposi sarcoma were found. In the area of glans penis, the coronal sulcus and the scrotum there were erosive crustose plaques. There was distal onychodystrophy of the toe nails

Figure 1. Erosive lesions covered with yellowy-brown dense coatings

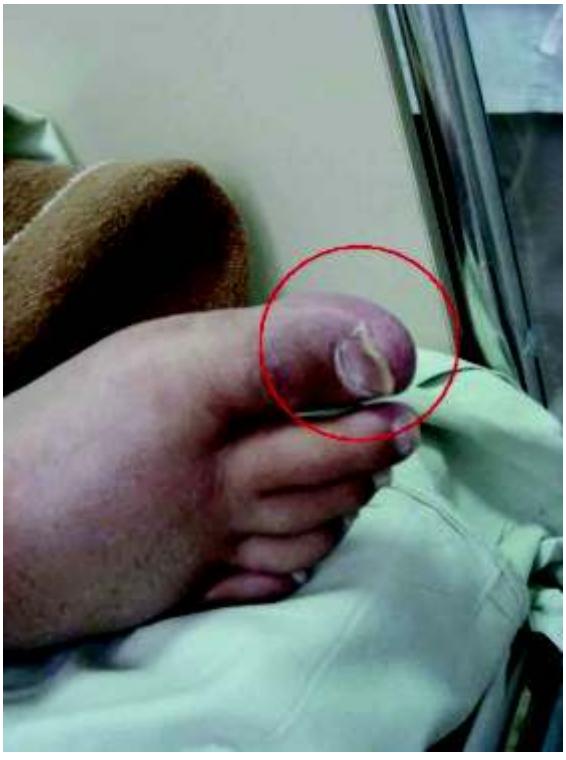

Figure 2. Distal onychodystrophy of the toe nails

Laboratory examination. There were no deviations in the results from routine paraclinical tests. Iimmunoflowcytometric analysis revealed impaired cell-mediated immunity with clear disbalance in lymphocytic subpopulations: total T-lymphocytes (CD3+) 73.13% (normal: 67-76 %); activated T-helpers (CD3 + DR +) 27% (normal range 8.0-15); T-helpers (CD4+) 3.45% (normal range 3-46); T-suppressors (CD8 +) 69.78% (normal range 31-40); correlation Th/Ts 0.05 (normal range 1.1-1.5); B-lymphocytes (CD19+) 1.08% (normal range 5-16); total NK-cells (CD3 -/CD16+56+) 10.32% (normal range 2-11).

The anti HCV antibodies were (+) positive, and serological detection of syphilis negative.

The histopathological examination of a biopsy sample from the hard palate revealed vascular formations with predominance of endothelial cells and spindle-shaped cell formations with vascular slits, vasodilatation with extravasates and inflammatory perivasal dermal infiltrate.

The mycologic testing of the toe nails revealed Scopulariopsis brevicaulis, and of the oral cavity and glans penis Candida albicans. Abdominal echography revealed hepatomegaly, multiple clusters of lymph nodes, and the presence in the right kidney of 4-5 hypoechogeneous rounded masses sized 16-18mm, some of which with a double contour of the “bull's eye” type, hydronephrosis stage I-II. Lung X-ray revealed a pleural effusion on the left side. No other opportunity infections were found.

Diagnosis: On the basis of data from the history, clinical presentation and laboratory findings, it was concluded that the patient had HIV-associated Kaposi sarcoma, B-cell lymphoma, Hepatitis C, mucosal candidosis and distal subungual onychomycosis.

Treatment: Antiretrovirus therapy was carried out with Trivizir®(abacavir sulfate, lamivudine, zidovudine) (1tablet bds) and Itraconazole. Shortly after hospitalization in Pleven, the patient died.

Discussion

Kaposi sarcoma was first described by Moriz

Kaposi in 1872 as a malignant multifocal neoplastic process, arising from the endothelium of the vascular and the lymph vessels [1, 2, 3]. In about 30% of the patients suffering from AIDS, Kaposi sarcoma is an initial dermal manifestation of the disease. In these cases, the dermal lesions are different from the classic Kaposi sarcoma type. They are smaller in size, localized mainly in the upper part of the torso and the oral mucosa, and the progress is faster. Internal organs are affected in 75% of the cases. Dermatophyte infections are common in HIV-infected patients [2]. Onychomycosis develops in 12% of the cases. Oral candidiasis is detected in 42.7% of the patients. Proximal subungual onychomycosis is more common in patients suffering from AIDS, while in the case we report, a distal subungual onychomycosis was detected, caused by Scopulariopsis brevicaulis [4, 5].

The AIDS pandemic is one of the challenges of the 21st century. Nowadays, AIDS is a major cause of death of people all over the world. The first recorded case of AIDS was in 1981 and the number of people suffering from it has been increasing ever since. About 30% out of the 40 million who live with HIV are between 15 and 24 years of age. Young people are vulnerable because of their risky sexual behaviour. The number of the newly-registered HIV-positive people in Bulgaria in 2007 was 114, of which 95 (83.3%) are men and 19 (17.5%) were women, i.e. there has been a significant increase in the number of HIV-positive men.

After the introduction of the Highly Active Antiretrovirus Therapy (HAART), a number of studies have revealed that there is a change in the structure of the causes of death related to HIV infection. The non-infectious HIV-associated causes for death are prevailing cardiovascular diseases, drug-addiction, and alcohol abuse, at the expense of the decreased frequency of opportunistic infections.

According to the criteria of International Health Organisation criteria for clinically-manifested HIV infection in adults (Table 1), there were two major features present in our patient Kaposi sarcoma and candidosis; one of the characteristic features B-cell lymphoma; and three disease-related features genital ulcers, loss of weight and lymphadenomegaly. It is agreed that a person has a clinically-manifested HIV-infection if clinical testing detects:

1. At least one major feature
2. At least two characteristic features
3. One characteristic and at least two related features
4. Two related features along with a HIV-positive test.

Table 1. International Health Organisation Criteria for clinically-manifested HIV infection in adults

International Health Organisation Criteria for the clinically-manifested HIV infection in adults	Clinical Features
Major feature	Sarcom0 Kaposi; Candidiasis; Pneumonia (Pneumocystis carinii); Retinitis (Cytomegalovirus); Encephalitis
Characteristic features	Hair Leucoplakia; Herpes zoster; B-cell lymphoma; Tuberculosis
Disease-related features	Genital ulcers; Loss of weight; Lymphonodulomegaly; Diarrhoea; Cough

Conclusion

In conclusion, the patient we presented had a HIV-associated Kaposi sarcoma, B-cell lymphoma, virus hepatitis C, mucosal candidiasis and distal subungual onychomycosis. This is a rare case of advanced HIV infection.

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