

Disseminated Histoplasmosis in an AIDS Patient

Maria Paula Rua Rodriguez Rochedo¹, Beatriz Moritz Trope², MarienSiqueira Soto Lopes¹, Tullia Cuzzi³ and Marcia Ramos-e-Silva⁴

¹Sector of Dermatology and Post-Graduation Course – University Hospital and School of Medicine, Federal University of Rio de Janeiro, Brazil

²Sector of Dermatology, University Hospital and School of Medicine, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

³Sector of Pathology, University Hospital and School of Medicine, Federal University of Rio de Janeiro, Brazil

⁴Sector of Dermatology and Post-Graduation Course, University Hospital and School of Medicine, Federal University of Rio de Janeiro, Brazil

*Corresponding author: Marcia Ramos-e-Silva, Rua Dona Mariana 149 / C-32, 22280-020 Rio de Janeiro, Tel: 552122864632; E-mail: ramos.e.silva@dermato.med.br

Received date: October 17, 2014; Accepted date: November 27, 2014; Published date: December 02, 2014

Copyright: © 2014 Ramos-e-Silva M, 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.

Abstract

The authors report a case of histoplasmosis in an Aids patient who took HAART irregularly for the past 10 years. He presented pulmonary symptoms and cutaneous lesions on the face. Therapy with amphotericin B followed by itraconazol controlled the fungal infection. Physicians who deal with Aids patients must be aware of the possibility of this mycosis especially when there is a low CD4 count.

Keywords: Histoplasmosis; AIDS; Immunodepression

Introduction

Patients with Acquired Immunodeficiency Syndrome (AIDS) are susceptible to both infection and dissemination of infectious-parasitic diseases caused by endemic pathogens in certain areas.

Histoplasmosis is a condition caused by *Histoplasma capsulatum*, a thermally dimorphic endemic fungus on some temperate zones worldwide, as Mississippi, Ohio, and St. Lawrence river valleys, in the United States, areas in Mexico and at the Caribbean region, where the fungus is found in great concentration in the soil contaminated by bird or bats excreta [1-4].

Transmission to humans is by inhalation of spores from the soil or direct inoculation on the skin, and person to person transmission is not described [4,5].

Case Report

A 44-year-old man, HIV positive for 10 years with irregular therapy, presented with malaise, fever, cough, night sweats and weight loss.

He reported worsening with dyspnea to moderate efforts and high fever during the last month when also he presented papular lesions on the face being treated as impetigo. He was then admitted at our hospital for investigation.

There was immunity fail with probable resistance to the antiretroviral therapy (HAART) irregularly used by the patient. He was also been previously treated for tuberculosis ten years before and even though initial investigation for this mycobacteriosis was negative, a panel of experts decided to retreat as a reactivation due to impaired immunity with streptomycin, ofloxacin, isoniazid and ethambutol. HAART was restarted with different drugs: lamivudine + zidovudine, atazanavir e ritonavir.

He left the hospital with some improvement but two months latter he was readmitted with worsening of pulmonary symptoms, cough

and dyspnea, and skin lesions, for which he was taking cephalexin. (Figure 1, Figure 2, Figure 3)

At this time CD4 count was: 57 cell/mm³ and viral load was below 50 copies/ml. Blood cultures, spontaneous sputum, bronchoscopy with bronchoalveolar lavage, computed tomographic scan, serology for *Aspergillus*, *Histoplasma* and *Paracoccidioides* were executed and a consultation from the Dermatology Sector was also requested.

A skin biopsy was performed with hypothesis of systemic mycosis and mycological culture revealed *Histoplasma capsulatum*, (Figure 4, Figure 5, Figure 6).

The fungus was isolated in the sputum and serology by immunodiffusion for *Histoplasma* was positive, configuring systemic illness.

The patient was treated for 21 days with amphotericin B and after clinical improvement of the respiratory symptoms and cutaneous lesions, he went home still on treatment with itraconazol 400mg/per day.

Discussion

Histoplasma capsulatum is a fungus known as a true pathogen because it can cause disease in immuno-competent hosts depending on the amount of spores inhaled and can also act as an opportunistic pathogen in those with impaired T cellular immunity, such as AIDS patients [1].

Disseminated disease generally occurs at the moment of diagnosis thus in patients without HAART and that are in advanced stages of disease with CD4 below 100 cell/mm³ [5].

Histoplasmosis affects primarily the lungs but skin lesions are present in 10 to 15 per cent of disseminated disease cases. Cutaneous and mucosal lesions appear to be more common in some geographical areas than others;6 as they are relatively frequent in Brazil as compared to the United States. These variable clinical manifestations may be related to genetic differences at the causative organisms from the respective geographical locations.

In endemic areas tuberculosis is its main differential diagnosis. Itraconazol and amphotericin B are the main drugs used with good results [3]. Successful therapy with voriconazole and posaconazole was reported [4].

Conclusion

All physicians who deal with Aids patients must be aware of the possibility of this mycosis when there are lung, skin and/or mucosal lesions, especially when there is a low CD4 count. In South America, there is a very important differential diagnosis to be taken into account which is paracoccidioidomycosis.

References

1. Murray JF, Mills J. (1990) Pulmonary infectious complications of human immunodeficiency virus infection: Part II. Am J Respir 141: 1582-1598.
2. Mora DJ, dos Santos CT, Silva-Vergara ML. (2008) Disseminated histoplasmosis in acquired immunodeficiency syndrome patients in Uberaba, MG, Brazil. Mycoses 51: 136-140.
3. Costa RO. Micosessubcutâneas e sistêmicas. In: Ramos-e-silva M, Castro MCR. (2011) Fundamentos de Dermatologia. Rio de Janeiro: Atheneu 865-877.
4. Elewski BE, Hughey LC, Sobero JO. Fungal diseases. In: Bologna JL, Jorizzo JL, Schaffer JV. (2012) Dermatology. 3ed. New York: Elsevier 1251-1284.
5. Lenhart SW, Schafer MP, Singal M, Hajjeh RA. (2004) Histoplasmosis – protecting workers at risk. Department of Health and Human Services. Centers for Disease Control and Prevention. National Center for Infectious Diseases 1-39.
6. Karimi K, Wheat LJ, Connolly P (2002) Differences in histoplasmosis patients with acquired immunodeficiency syndrome in the United States and Brazil. J Infect Dis 186: 1655-1660.