Cutaneous Histoplasmosis in an Immunocompetent Patient

İMMÜNKOMPETAN BİR HASTADA DERİ HİSTOPLAZMOZİSİ

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Abstract

Histoplasmosis is a fungal infection due to Histoplasma capsulatum. It may be manifested by limited pneumonia or a hematogenous widespread fungal infection with a potentially fatal outcome especially in elderly individuals and in immunocompromised patients. Cutaneous manifestations of histoplasmosis may be divided into primary and secondary lesions. Here, we report a case of cutaneous histoplasmosis in an immunocompetent patient. A 26-year-old male patient was referred with a complaint of facial lesions. Medical history revealed that he had received potent corticosteroid therapy topically for three years. Dermatopathological examination showed a yeast-like form of Histoplasma capsulatum in the cytoplasm of macrophages and a dense dermal lymphohistiocytic inflammatory infiltration. Systemic involvement was absent. The patient received 200 mg/day of itraconazole treatment. The lesions healed after two months of therapy. But new lesions were observed after three months and the same treatment was restarted. He is still in our follow-up.

Key Words: Histoplasmosis, histoplasma capsulatum, treatment

Özet

Histoplazmozis, Histoplasma capsulatum'un etken olduğu bir mantar hastalığıdır. Bu enfeksiyon pnömoni ile veya özellikle immün sistemi baskılanmış hastalarda ölümcül olabilen hematojen yayılımla kendini gösterebilir. Deri tutulumu primer ve sekonder olabilir. Burada immünkompetan bir kutanöz histoplazmozis olgusunu bildiriyoruz. Yirmialtı yaşındaki erkek hasta polikliniğimize yüzde iyileşmeyen yara şikayeti ile başvurdu. Hastanın hikayesinden üç yıldır aralıksız olarak topikal kortikosteroid kullandığı öğrenildi. Yapılan dermatopatolojik değerlendirilmede, makrofaj sitoplazmaları içinde Histoplasma capsulatum sporları ve yoğun dermal lenfohistiyositik inflamatuar infiltrasyon saptandı. Hastada sistemik tutuluma ait bulgular yoktu. Hastaya 200 mg/gün itrakonazol tedavisi başlandı. Lezyonlar iki ay sonra iyileşti. Ancak üç ay sonra yeni lezyonlar görülmesi üzerine aynı tedaviye yeniden başlanılan hastanın takiplerine devam edilmektedir.

Anahtar Kelimeler: Histoplazmozis, histoplasma capsulatum, tedavi

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Histoplasmosis had been considered as a rare and always fatal disease. Darling first described this fungal infection in 1906. The two types of histoplasmosis can be distinguished, one type ise due to Histoplasma capsulatum var. capsulatum and the other one is due to Histoplasma capsulatum var. dubolsii.[1] The incidence of this infection has increased in human immunodeficiency virus (HIV)-infected patients and in other immunosuppressed individuals.[2] The respiratory tract is the usual portal entry of the fungus. The primary lesions occur generally in the lungs. The clinical manifestations of histoplasmosis are divided into three categories; acute primary, chronic cavitary and progressive disseminated. Natural infection by Histoplasma capsulatum occurs by inhalation or rarely by direct

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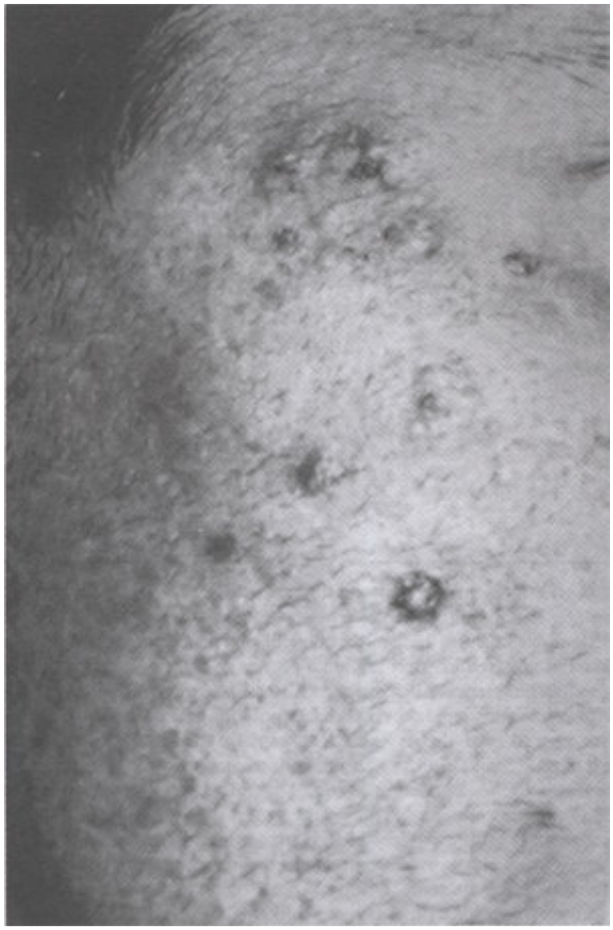

Figure 1. Crusted erythematous papules on the face of the patient.

inoculation into the skin. Cutaneous manifestations of histoplasmosis may be divided into primary and secondary lesions.[3] Here we report a case of cutaneous histoplasmosis in an immunocompetent patient.

Case Report

A 26-year-old man was admitted with facial lesions. His medical history revealed that he had received topical potent corticosteroid therapy (clobetasol 17-propionate) for three years because of the misdiagnosis of discoid lupus erythematosus. The patient was not in contact with birds or cats. He was working in a laundry as an iron man and had not visited any known endemic area for histoplasmosis. Physical examination revealed numerous crusted erythemateous papules on the face and left auricula (Figure 1 and 2). Axillary and cervical lymphadenopathies were absent. There was no symptoms or any sign of systemic involvement. Dermatopathological examination revealed a yeast-like form of H.capsulatum in the cytoplasm of macrophages and a dermal lymphohistiocytic inflammatory infiltration (Figure 3). Fungal culture confirmed also the histoplasma capsulatum infection. Laboratory staff has been alerted about danger to make culture of such a fungus before the culture. Laboratory parameters were reported as; hemo-

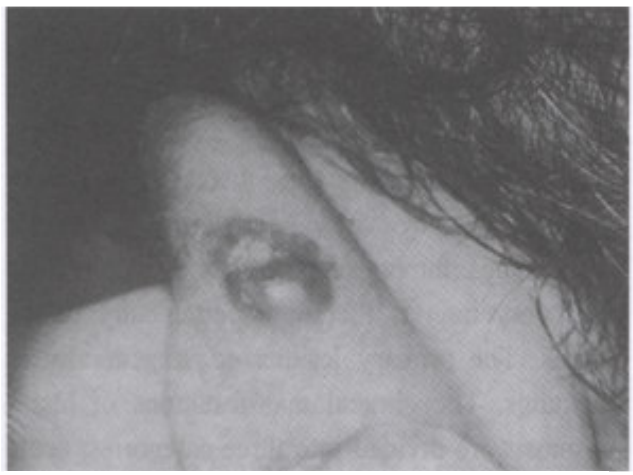

Figure 2. Erythematous papules and nodules on the left auricular region.

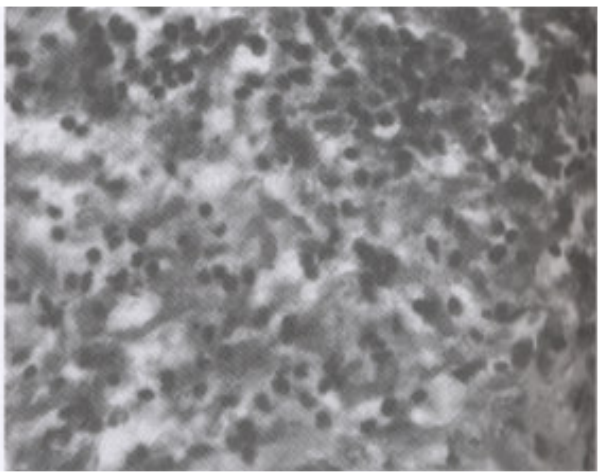

Figure 3. A yeast-like form of Histoplasma capsulatum in the cytoplasms of the macrophages (H&E, X 40).

globin 12.6 gr/dl, hematocrit 39%, and white blood 6620 cells/mm^3. IgA, IgM, IgD, and IgG levels were 360,3 mg/dl (100-490), 55.1 mg/dl (50-320), 15.00 IU/ml (2.00-99.30), 1404 mg/dl (800-1700), respectively. Serum C4 level was reported as 0.139 gr/L (0.2-0.4). Hepatic function tests and serum electrolyte levels were all within the normal ranges. Chest roentgenogram was also normal. Enzyme-linked immunosorbend assay (ELISA) test for the detection of HIV infection was negatif. We started 200 mg/day itraconazole treatment. The lesions healed after two months of therapy. But new lesions were observed after three months and we restarted the same therapy. He is still in our follow-up.

Discussion

Histoplasmosis is a granulomatous disease which is caused by a dimorphic fungus, Histoplasma capsulatum. It was formerly described as a severe, inevitably fatal disease in several epidemiologic studies.[4] Most infections occur after inhalation of a fungal yeast-like form and are either subclinical or present with mild respiratory symptoms; however, depending on the host response and the extent of inoculation, a variety of clinical manifestations can occur. Cutaneous lesions of histoplasmosis are extremely rare. It may be primary or secondary.[3] In approximately 6% of patients with disseminated histoplasmosis and at least 11% of patients with HIV-associated disseminated histoplasmosis, cutaneous and mucosal manifestations are associated with the progressive dissemination of primary pulmonary histoplasma capsulatum infection.[5] Primary cutaneous histoplasmosis usually results from a local trauma. As a consequence the lesion is unique and most often localized to the hand, professional or occupational activities can explain a possible inoculation.[6] On the other hand a reactivation of a previous infection can be localized with cutaneous or mucosal oral involvement or a visceral localization such an adrenal gland abscess for example.[3] However, we consider that our patient had primary infection. Primary cutaneous histoplasmosis is extremely rare in the literature and all of the cases were described in immunocompromised individuals.[7-10] Each case had resulted from direct cutaneous inoculation consisting of an ulcerated nodule that healed uneventfully. Clinical manifestations usually include nodules, papules, and ulcers, and less frequent presentations are macules, pustules, acneiform lesions, vegetative verrucous plaques, vesicles, and purple patches.[1]

In conclusion, our patient had no systemic involvement. He was also not an immunocompromised host. Histoplasmosis is extremely rare in Turkey. To the best of our knowledge; only one case with cutaneous histoplasmosis associated with hyper-IgM has been previously reported.[11] Our case suggest that that there may be other cases of cutaneous histoplasmosis underestimated or misdiagnosed. In our patient there were several lesions and no argument in favor of any inoculation. We think that the suppression of the local immunological defense system due to the long-term topical steroid treatment may be responsible for the cutaneous histoplasma infection in our patient.

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