Primary Cutaneous Histoplasmosis Simulating Molluscum Contagiosum

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Abstract

Primary cutaneous histoplasmosis in a HIV positive patient ie isolated cutaneous involvement without any deeper structures is a very rare entity. Only a handful cases have been reported worldwide. This patient presented with cutaneous lesion simulating Molluscum but histopathology revealed Histoplasma capsulatum. The patient had no deep organ involvement. The patient was put on Itraconazole which caused rapid dissolution of the lesions. He was subsequently put on HAART and discharged.

Introduction

Disseminated histoplasmosis in an immunocompromised individual is fairly common if the CD4 count is below 200 cells/µl, however isolated involvement of skin without deep structures have rarely been reported. Histoplasmosis in an immunocompromised individual usually manifests as a disseminated disease involving the lungs, liver, spleen, lymph nodes, bone marrow and sometimes the skin and mucous membranes. Cutaneous lesions can occur in up to 5-17% of patients with disseminated histoplasmosis and can manifest as papules, pustules, plaques, ulcers, molluscum or wart-like lesions and rarely, erythema nodosum. But Primary Cutaneous histoplasmosis with Molluscum like presentation is an extremely rare condition. Hereby we elucidate this unusual entity in our case report.

A 38 year old male, resident of Cooch Behar, West Bengal got admitted to the General Medicine Ward with complaints of fever and papulovesicular lesions all over the body. Detailed communication revealed that the patient had a history of intermittent fever without chill and rigor for past three months. One month back he suddenly developed papulovesicular lesions over his left arm followed by face and then gradually all over the body. He took homeopathic medications and few traditional therapies which aggravated his illness when he finally got admitted to a regional hospital from where he was referred here. He had no significant medical or surgical history. He is a truck driver by occupation for around 20 years and got married 11 years back. He gave a history of heterosexual contact before marriage.

On inspection there were multiple dusky red, papulovesicular, umbilicated, oozing and painful lesions all over the body (Figure 1). There was no significant cervical, axillary and inguinal lymphadenopathy. General examination was unremarkable except that his body temperature was raised. He had oral ulcerations which caused dysphagia. His right little finger got crushed while driving in his truck 2 months back. He lost his nail and there was periungal swelling (Figure 2).

Routine hematological and biochemical investigations were within normal limits. He was recently diagnosed to be Human immunodeficiency virus (HIV) positive (HIV 1, HIV Comb, SD Bioline,Triline). Few samples for FNAC were collected from facial lesion. Gram stain demonstrated multiple intracellular and extra cellular, single oval yeast like organisms. Giemsa stain showed round-to-oval organisms with a clear halo inside the macrophages suggestive of Histoplasma. Higher magnification showed the macrophages as having intracellular fungal spores of size 2-4 µm. Oil immersion microscopy identified clear surrounding haloes around all the spores.Biopsy of the skin lesion revealed polypoid structure with thinned out epidermis. The papillary and reticular dermis is filled up with foamy histiocytes. Within the histiocytes there are tiny PAS positive fungal yeasts seen, morphologically similar to Histoplasma (Figures 3 and 4). X-ray of the chest was normal. Computed Tomography of chest and ultrasonography of the abdomen did not reveal any significant abnormality.CD4 count was found to be 130 cells/µl. The patient was treated with oral Itraconazole 200 mg twice daily and the cutaneous lesions have partially regressed. He was started on ART with Lamivudine, Zidovudine, Nevirapine (Figures 5 and 6).

He was discharged after one and a half month with Itraconazole 200mg b.i.d and Anti Retroviral Drugs. He was clinically stable at that point of time. He was advised to Medicine OPD after two months with Liver function Study and Routine Hemogram. (Figure 7).

Discussion

Histoplasmosis is caused by Histoplasma Capsulatum var Capsulatum which is found in America and the Tropics and Histoplasma Capsulatum var duboisii found in Africa. The African form differs from the American form in clinical and pathological features. Histoplasma is an obligate intracellular parasite affecting the reticuloendothelial system and involving liver, spleen, kidney, CNS and other organs. It is a saprophyte isolated from soil contaminated with chicken feathers and droppings. It occurs mainly in immunocompromised individuals, more so in HIV-infected persons and usually with a CD4 counts<200 cells/µl.

Clinical manifestations of histoplasmosis are of four main types: Acute pulmonary, progressive disseminated, chronic cavitatory/pulmonary forms and complicated pulmonary Histoplasmosis. On initial exposure to the fungus, the infection...
is self-limiting and restricted to lungs in 99% of the individuals while the remaining 1% progress to either disseminated or chronic disease involving the lungs, liver, spleen, lymph nodes, bone marrow and sometimes the skin and mucous membranes. Histoplasmosis in immuno-compromised individuals has been reported in India. Panja and Sen first reported histoplasmosis from India in 1959.4

Cutaneous lesions occur in up to 5-17% of patients with disseminated histoplasmosis and can manifest as papules, pustules, plaques, ulcers, molluscum or wart-like lesions and rarely, erythema nodosum. Mucosal involvement is characteristic with gingival ulcers, plaques, nodules and abscesses or molluscum contagiosum-like lesions.5 The route of infection is through direct inoculation of spores through skin and mucous membranes due to trauma. In our case, the crushed...
fingert was the most likely portal of entry for the fungus.

Owing to the polymorphous presentation, a high index of suspicion is required and biopsy and culture of lesions is mandatory. In the absence of skin lesions, blood and bone marrow culture are sensitive methodologies. Fungal cultures are the gold standard but results are positive after one month in 75% of cases of Progressive Disseminated Histoplasmosis and Chronic Pulmonary forms. Culture yield highest in BAL fluid, bone marrow aspirate and blood. Skin biopsy can prove to be useful in establishing the diagnosis, especially in a set-up where facilities for serodiagnosis are not readily available. Antibody detection tests like complement fixation, DNA probes and radioimmunoassays are successful, but can be performed only in very few sophisticated centers. Detection of polysaccharide antigen in serum, urine or bronchoalveolar lavage in patients with disseminated histoplasmosis is a rapid and specific diagnostic method. Tissue biopsy when possible, may show endothelial cells packed with intracellular and extracellular forms *Histoplasma capsulatum*.

Most acute forms of Histoplasmosis in immunocompetent hosts resolve without specific treatment. Systemic antifungal treatment is indicated for severe acute pulmonary histoplasmosis, chronic pulmonary histoplasmosis, progressive disseminated histoplasmosis and any manifestation in an immunocompromised patient. Lipid formulations of AMB are preferred in Acute pulmonary, PDH and in CNS manifestations. Deoxycholate formulations are preferred in case of nephropathy. Dosage is usually 3mg/kg/day. In other situations Itraconazole 200-400 mg/day is usually administered. Alternatives are posaconazole, voriconazole and fluconazole. Duration of therapy is usually 6-12 weeks in acute pulmonary and one year in PDH and chronic cavitory forms. Antiretroviral treatment improves outcome in AIDS patients and is recommended. Lifelong therapy with Itraconazole is now not advocated in AIDS patients if CD4+ count is atleast 150/µl. Relapse occurs in 10-20% of patients with disseminated infection and in as many as 80% of those with AIDS.

Primary cutaneous histoplasmosis in immunocompromised individuals is rare entity. Very few such cases have been reported so far. Vasudevan et al. reported a case primary cutaneous histoplasmosis in a HIV patient from Shillong. The patient had multiple papulonodular lesions associated with cervical and axillary lymphadenopathy. Singhi et al reported another case of a 60-year-old immunocompetent lady with disseminated primary cutaneous histoplasmosis from Jodhpur. This patient of ours have some unique features. Our patient had lesions over face, chest, back and limbs. The lesions resembled Molluscum contagiosum that confused the clinicians. The skin lesions mimicked molluscum and improved with Itraconazole. The response of the lesions to oral antifungals in such a short duration along with the absence of any systemic symptoms.

References