Disseminated Cutaneous Histoplasmosis in HIV Infection

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A 45 year old male patient, labourer by profession, presented with low grade fever and occasional dry cough for 1 month. For the last 2 weeks before admission, the patient noticed rounded fleshy eruptions over his face (Figure 1) which later involved his trunk and lower limbs. There was no significant past history. He denied any H/O addiction, contact, or blood transfusion but confessed H/O exposure. At the time of admission, he was febrile and looking ill with fleshy violaceous nodules having central umbilication over face, chest and lower limbs. There was bilateral axillary lymphadenopathy. Oral examination was significant for candidiasis. Respiratory system examination revealed tachypnoea and diminished vesicular breath sound with bilateral crackles throughout the chest. The cardiovascular, per abdominal and nervous system examinations were essentially normal.

The routine blood examination showed neutrophilic leukocytosis. ELISA test for HIV 1 was positive with CD4 count of 12 cells/ mm³. Chest X-ray showed reticulo-nodular infiltrates consistent with *Pneumocystis jirovecii* pneumonia; an abdominal ultrasound was performed which remained normal. Sputum sent for Gram’s stain, Z-N stain and silver methenamine stain were found to be negative. Co-trimoxazole and Highly Active Anti Retroviral Therapy (HAART) consisting of zidovudine, lamivudine and efavirenz were started. His fever and respiratory complaints subsided but skin lesions persisted.

The skin biopsy report (Figure 2) showed dermal infiltrations with macrophages teeming with intracellular and extracellular fungus. Grocott Gomori Methenamine silver (GMS) stain was positive for Histoplasma. Amphoterecin B was started intravenously and his renal status was closely monitored. The lesions gradually disappeared and the patient improved.

Histoplasmosis or Darling’s disease is caused by *Histoplasma*, a dimorphic fungus. The acute disseminated form is more common in untreated AIDS patients who develop skin lesions in the form of papules, small nodules, or small molluscum like lesions with weight loss, fever, anaemia and hepatosplenomegaly, and diffuse micronodular pulmonary infiltrates in chest X-ray. In contrast, the primary cutaneous histoplasmosis is rare and follows inoculation of the organism into the skin and the primary lesion is usually a nodule or indurated ulcer often associated with local lymphadenopathy.\(^1\)

In our case, differential diagnoses of molluscum, cryptococcosis, penicilliosis, dermal leishmaniasis were entertained. Cryptococcosis in an immunocompromised patient is usually a disseminated disease. However, in GMS stain, the main differentiating features between histoplasmosis and cryptococcosis are the uniform size, oval shape, and occasional tapered forms of Histoplasma as opposed to the nonuniform size, round shape, and lack of tapering in Cryptococcus.\(^2\) Penicilliosis is an opportunistic pathogen and is endemic in southeast Asia though rarely reported from India. In Penicilliosis, the yeast-cells are spherical to ellipsoidal, 2 to 6 um in diameter, and divide by fission rather than budding. This characteristic distinguishes *P. marneffei* from *Histoplasma capsulatum* in Giemsa stained smears. In view of the above, our case was diagnosed as a reactivated (secondary) disseminated Histoplasmosis in an immunocompromised patient, albeit culture was not done.

References

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