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CASE STUDY

DISSEMINATED FUNGAL INFECTION IN AN IMMUNOCOMPETENT HOST

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ABSTRACT

An apparently healthy 50-year-old male, reported in OPD with the history of fever for last 1 year associated with decreased appetite and weight loss in last 6 months and skin rash all over body for last 4-6 weeks. On physical examination, the patient was looking ill. He was febrile, pale, tachycardic and blood pressure was within normal range. Axillary lymph nodes were enlarged, right was approximately of 6 cms x 4 cms, and left was 3 cms x 4 cms, firm, non-tender and mobile. He had raised skin lesions of varying sizes 0.5-1 cms all over body including the genitals, sparing palm and sole. Rash was not associated with redness, pain, itching or any discharge. Bilateral ulnar nerves were thickened. Abdominal examination revealed a moderately enlarged non-tender liver and palpable spleen. Cardiovascular, respiratory system and nervous system examination were normal. Provisional diagnosis of Lepra Reaction/ skin manifestation of lymphoma / infective etiology such as Tuberculosis, Fungal infection and Human immunodeficiency virus (HIV) was kept. After bone marrow examination and biopsy from the skin lesion patient was ultimately diagnosed as disseminated fungal infection. Patient was initiated on treatment with colloid amphotericin B IV for 3 days followed by oral itraconazole 200 mg BD. On follow - up patient is doing well his lymph nodes have disappeared his fever has subsided and skin lesions are regressing. He is still on followup.

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INTRODUCTION

Fungi are eukaryotes, grows predominantly by budding (yeast), or by filamentous extension called hyphae (moulds). They are extremely common organism, widely distributed in nature. Fortunately only a tiny minority causes human disease, although many other are plants and animal pathogen. Fungal infection transmitted by spores or hyphae normally enters the body through lungs or skin. Fungal infection tends to be chronic and often require prolonged chemotherapy. For many years fungal infection considered trivial rather than life threatening in recent years fungal infections have become much more important in immunocompromised patients (transplant, patients on immunosuppressive drugs, leukaemia, other cancer patients, diabetics, AIDS). Fungi are classified as -True yeast, *Cryptococcus neoformans*, *Sacromyces cerevisiae*, yeast like fungi, *Candida albicans* and other *Candida* species. Dimorphic fungi- *Histoplasma capsulatum*, *Blastomyces dermatidis*, Moulds, *Aspergillus fumigatus* and other *Aspergillus* species.

Case report

An apparently healthy 50-year-old male, reported in OPD with the history of fever for last 1 year, decreased appetite and weight loss in last 6 months, skin rash all over body for last 4-6 weeks. With such complaints, patient visited different sources without response. Patient presented to HIHT on 17.4.14 in medicine OPD. On observation patient was conscious, oriented, febrile, Pulse-88/min, regular, normovolaemic, BP-130/82 mm Hg, Pallor and bilateral axillary lymphadenopathy was present. Right axillary apical node- of 6x4 cm, left axillary node-3x 4 cms, all were firm, non tender and mobile. Skin showed raised lesion of varying sizes (0.5-1 cms) all over body, Including the genitals, oral cavity, sparing the palm and sole, Not associated with redness, pain, itching or any discharge, all rashes evolved overnight. No icterus/cyanosis/clubbing/pedal edema. On systemic examination abdomen was soft, hepatomegaly- around 1 cm down the right costal margin, non tender, surface smooth and margins regular, splenomegaly – around 2 cm down the left costal margin, non tender. Splenic notch felt. No free fluid. Respiratory system and cardiovascular system examination was within normal limit, central nervous system-bilateral Ulnar

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nerves were thickened. Provisional diagnosis of Lepra reaction, skin manifestation of Lymphoma, Tuberculosis, Fungal infection and HIV was kept.

Investigative workup

- Peripheral blood film - Moderate anemia of microcytic hypochromic type.
- Biochemistry investigation - Alkaline phosphatase (ALP):- 116 (33-96 IU/L).
- Xray chest - Normal
- Skin punch biopsy - shows features consistent with deep dermal fungal infection.
- Bone marrow examination - Normal to mild increased cellularity.
- Impression on BMA and BME smears: Show presence of ill defined granulomas with many ? Fungal spores.
- FUNGAL CULTURE - shows no growth after 14 days of incubation.
- Antibody to HIV 1& 2: Non – reactive.

Course of patient in hospital

- Patient was advised to undergo a lymph node biopsy on account of contradicting reports of cytology from lymph node and skin biopsy/bone marrow but he refused for the same.
- Based on the Skin Biopsy and Bone marrow findings patient was initiated on treatment with colloid amphotericin B iv for 3 days followed by oral itraconazole 200 mg BD.
- Patient on follow up has relief in his fever and his skin lesions also appear to be regressing however he still develops occasional fever.
- Patient has been advised for a lymph node/ liver biopsy on next visit.

Cells	Differential Count	Normal reference values(%)
Blasts	00	0 - 3
Promyelocytes	01	3 - 12
Myelocytes	10	2 - 16
Metamyelocytes	31	2 - 6
Polymorphs	18	22 - 46
Lymphocytes	10	5 - 20
Monocytes	03	0 - 3
Eosinophils	05	0.3 - 4
Basophils	00	0 - 0.5
Plasma cells	02	0 - 3.5
Erythroid	20	

test	results	normal reference range
Hemoglobin (Hb %)	8.45	13 - 18 g/dl
Total RBC count	3.69	4.6 - 6.2 million/mm ³
TLC	9.16	4 - 11 Thou/cumm
PCV	26.39	38 - 47 %
MCV	71.54	80 - 96 fl
MCH	22.91	27 - 31 pg
MCHC	32.03	32 - 36 %
Platelet count	215	150 - 400 thou/cumm
RDW	19.18	11.6 - 14.8 %
DLC	P83 L06 E02 M09	

