



Cutaneous Cryptococcosis: A rare case report

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Abstract

Background: *Cryptococcus neoformans* is an encapsulated yeast and it is most frequent cryptococcal species found in humans. Cryptococcus remains an important opportunistic pathogen among immunocompromised patients. Although there are some reports of Primary cutaneous cryptococcosis. Cryptococcal lesions of skin is a rare feature of disseminated cryptococcosis and has poor outcome if left undiagnosed or treated.

We present a case report of 40 years old male on antiretroviral therapy for the past 10 years and CD4 count of 50 cells/ μ l. with multiple cutaneous lesions on face, arms and feet which resembled++ to molluscum like cutaneous lesions. Diagnosis of the case was done by India ink preparation of CSF and crushed skin smear from the lesions by gram stain, culture on Sabouraud's dextrose agar (SDA), Niger seed agar and urease hydrolysis test shown by the organism on Christensen's urea medium.

Keywords: *Cryptococcus neoformans*, opportunistic infections, immune-compromised, primary cutaneous cryptococcosis, disseminated cryptococcosis

Introduction: Case Report

A 40 year old male with complains of fever with chills, severe headache, neck stiffness and disorientation since past one week presented to the Medicine department. On examination addition to the above findings, multiple cutaneous lesions were also seen on face, arms and feet which were about 4-5 mm in size and had central depression. On asking about patient's history, it was seen that patient was known case of PLHIV and was on antiretroviral therapy from past 10 years with CD4 count of 50 cells/ μ l. Patient's lumbar puncture was done and CSF was collected along with crushed smear from papule were send for Microbiological analysis. Other laboratory investigations were also done like total leucocyte count which was 4120 cells/mm³. Platelet count was 1.5 lakhs/mm³. Renal function test and liver functions tests were deranged. CSF analysis showed lymphocytic pleocytosis, glucose 80mg/dl, protein 0.5 mg/dl.

India ink preparation of CSF showed capsulated spherical yeast cells, while gram stain of crushed smear from papules showed gram positive spherical yeast cells. CSF was inoculated on SDA and incubated at 37° C for 48 hours. Mucoid colonies were seen on SDA which was confirmed as *Cryptococcus spp.* by gram stain, Christensen's urease test and brown colour colonies on Niger seed agar.

Patient was diagnosed as a case of cryptococcal meningitis with secondary cutaneous cryptococcal lesions. Patient was started on intravenous Amphotericin B (0.7-1 mg/kg/day) along with flucytosine (100 mg/kg/day). The symptoms improved after initial intra venous therapy and patient was discharged on oral fluconazole maintenance therapy (400 mg/kg/day) and patient was asked for follow up visit after 2 weeks.

Discussion

Cryptococcosis is an infection caused by encapsulated yeast, *Cryptococcus neoformans* which can be recovered from pigeon excreta, soil, dust and human skin. It primarily affects lungs but disease disseminate *via* hematogenous route to various organs like central nervous system and skin^[4]. *Cryptococcus neoformans* is composed of three variants *C. neoformans var. gattii*, *var grubii* and *var neoformans*. *C. neoformans var gattii* is more common in tropical area and has been seen to effect immunocompetent patients^[4].

Conclusion

Cryptococcosis is more common among patients with CD4 counts < 50-100 cells/ μ l. Although primarily *cryptococcus* involves lungs which later disseminate *via* hematogenous route to CNS and skin^[5]. Cutaneous lesions appear as pedunculated papule with central depression, resembling lesions caused by molluscum contagiosum. Cutaneous cryptococcosis secondary to cryptococcal meningitis is usually a rare finding thus early diagnosis of cutaneous lesions especially in HIV/AIDS patients with low CD4 count can improve patient's outcome.

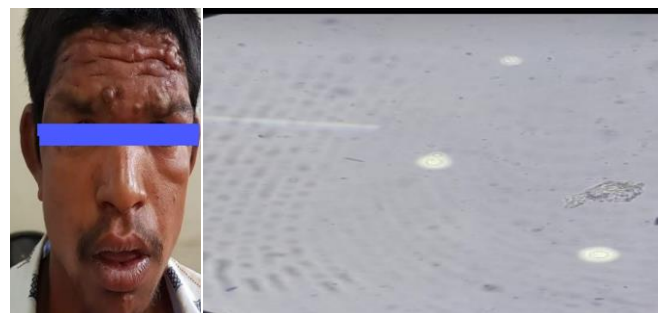


Fig 1

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