# Disseminated cryptococcosis with localized cutaneous lesion in an AIDS patient

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## ABSTRACT

A case of *Cryptococcus neoformans* causing localized cutaneous lesion over the left upper lip in an acquired immunodeficiency syndrome (AIDS) patient with cryptococcocal meningitis and pulmonary tuberculosis.

**Key words:** AIDS, *Cryptococcus neoformans, meningitis*

## INTRODUCTION

*Cryptococcus neoformans* is the most common cause of fungal meningitis especially among immunocompromized patients. Hematogenous lesions of the skin occur in about 10% of patients with Cryptococcosis. Skin lesions help in the early diagnosis of disseminated Cryptococcosis.[1] Here we report a rare case of *Cryptococcus neoformans* causing localized cutaneous lesion over the left upper lip in an acquired immunodeficiency syndrome (AIDS) patient with cryptococcocal meningitis and pulmonary tuberculosis.

## CASE REPORT

A 30-year-old human immunodeficiency virus (HIV) seropositive male patient was referred to Dermatology Department of Bowring and L. C. Hospital, Bangalore on September 19, 2007 with history of gradually increasing painless swelling over his left upper lip since one month. Patient was on antituberculosis treatment (ATT) for pulmonary tuberculosis since one month and his HIV status was known since 6 months.

### On examination

Well built male patient, afebrile. Pulse: 92/min, regular, blood pressure: 110/60 mmHg. Local examination of the swelling revealed painless lesion over left lip, 3 × 3 cm in diameter with ulceration draining thin exudates [Figure 1] with bilateral supraclavicular lymphadenopathy. No similar skin lesions were found in other parts of the body.

### CNS examination

Signs of meningitis were detected.

### Investigations

Blood routine: ESR: 60 mm/h
CD4 count: 95 cells/mm$^3$, CD8: 1739 cells/mm$^3$, CD4/CD8:0.05.
Mantoux test — Negative, VDRL — Nonreactive, TPHA — Negative.

Chest X-ray — Suggestive of pulmonary tuberculosis with mediastinal lymphadenopathy. Computed tomography (CT) scan of brain: Mild cerebral atrophy.

### CSF analysis

Protein — 121 mg/dl, Sugar — 41 mg/dl, cell count of 30/mm$^3$, granulocytes 25, lymphocytes 5. Gram stain showed gram positive budding yeast cells and nigrosin staining showed numerous capsulated budding yeast.

### Direct examination of the aspirate from the skin lesion

Gram stain, Budding yeast cells with capsule were seen [Figure 2].

KOH preparation — Positive for yeast cells, with capsule. Nigrosin preparation — showed budding yeast cells with capsule.

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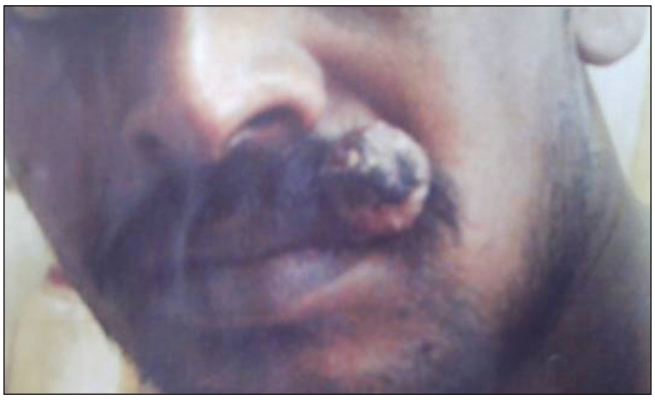

**Figure 1:** Cutaneous cryptococcosis — ulcerated lesion over left upper lip

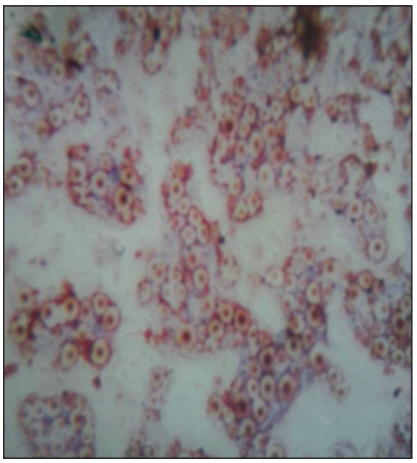

**Figure 2:** Grams stain of aspirate showing budding yeast cells

H and E stain — Yeast cells surrounded by wide capsule with little inflammatory reaction, PAS stain — Showing yeast cells with capsule.

### Culture

Sabouraud dextrose agar showed cream colored shiny, moist and mucoid colonies. Isolate was identified as *Cryptococcus neoformans* based on gram stain showing Gram positive budding capsulated yeast cells, nigrosin preparation showing capsulated yeast cells, positive urease test, growth at 37°C and brown colored colonies on Niger seed agar.

## DISCUSSION

Cryptococcosis is an infection caused by the encapsulated fungus *Cryptococcus neoformans*.[1] Cryptococcosis is an important herald of the advanced stages of HIV infection, occurring when the CD4 count is less than 200/mm$^3$.[2] The mortality rate of disseminated Cryptococcosis is 70-80% in untreated patients compared with those treated with systemic antifungal agents.[3] Previous study from our hospital showed that 6.25% of the AIDS cases had Cryptococcal meningitis.[4] Patient was treated with Amphotericin B 0.75 mg/kg/day for 2 weeks, which was changed to Fluconazole — 400 mg/day for 8 weeks. He responded well to treatment and the swelling started regressing in 3 weeks. After complete cure he was discharged.

From Bowring and L.C. Hospital, we have reported a case of advanced stage of AIDS with disseminated cryptococcosis, involvement of CNS, lungs and skin and a second case of disseminated cutaneous cryptococcosis in an immunocompetent patient.[5,6] This is the second report of disseminated cryptococcosis with localized cutaneous lesion in an AIDS patient from Bowring and L.C. Hospital Bangalore.

## REFERENCES


1. Kwon Chung KJ, Bennett JE. Cryptococcosis. Medical Mycology. 1st edn. Philadelphia: Lea and Febiger; 1992;16:397-447.
2. Dharmshale SN, Patil SA, Gohil A, Chowdary A, Oberoi C. Disseminated Cryptococcosis with extensive involvement in AIDS. Indian J Med Microbiol 2006;23:228-30.
3. Aberg JA, Poroderly WG. Cryptococcosis and HIV. http://hivinsite.ucsf.edu/ (Last accessed on 2012 Dec 12).
4. Vijaya D, Chandramma L, Anand Kumar BH. Oppurtunistic infection in AIDS cases at Bowring and LC Hospital, Bangalore. Karnataka J Med Sci 2000;5:96-8.
5. Vijaya D, Anand Kumar BH, Malini A, Mahantesh. Disseminated Cryptococcosis with cutaneous lesion in an AIDS patient. J Acad Clin Microbiol 2003;5:33-6.
6. Vijaya D, Anand Kumar BH. Disseminated Cryptococcosis with cutaneous lesion in an immunocompetent patient. Mycoses 2001;44:113-4.


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