

## CASE REPORTS

### CUTANEOUS CRYPTOCOCCOSIS AND MOLLUSCUM CONTAGIOSUM OCCURRING IN THE SAME LESION IN A PATIENT WITH AIDS

*DN Langewar, HJ Shroff, MA Kohli, SK Hira*

Patients with acquired immunodeficiency syndrome (AIDS) are susceptible to a wide range of pathogens due to profound defect in cell-mediated immunity. The co-existence of different diseases within the same lesion is a feature of human immunodeficiency virus (HIV) infection. We describe co-existent cutaneous cryptococcosis and molluscum contagiosum in the same lesion in a patient with the acquired immunodeficiency syndrome.

**Key words:** Cutaneous cryptococcosis, Molluscum contagiosum, AIDS

#### Introduction

Increased incidence of molluscum contagiosum and cutaneous cryptococcosis has been observed among patients with acquired immunodeficiency syndrome. Several reports suggest that cutaneous lesions of cryptococcosis in these patients may resemble those of molluscum contagiosum. Since the clinical appearance of an infectious cutaneous lesion depends not only on the host response, but also on the organism involved, it is not surprising that these lesions may present with atypical appearance. We describe "mol-

lusoid" skin lesions on the face of a patient with AIDS, the microscopy of which showed co-existing cutaneous cryptococcosis and molluscum contagiosum.

#### Case Report

A 31-year-old man seropositive for HIV 1 on Western blot was evaluated as an inpatient for scattered papular lesions. He had history of multiple heterosexual exposures. His AIDS defining illnesses included extragenital molluscum contagiosum, fever and profound weight loss, of one year duration. Clinically cutaneous lesions were present over both eyelids, face, chin and lips. These lesions were numerous, discrete, flesh-coloured, erythematous, umbilicated papules of 2mm to 20 mm in size. The left upper eyelid was the most affected with giant erythematous nodular lesions. A skin

From the Department of Pathology, Dermatology and STD, AIDS Research and control centre (Arcon), Grant Medical College and Sir JJ Group of Hospitals, Mumbai, India

**Address correspondence to:**  
Dr. D.N. Lanjewar  
Department of Pathology  
Grant Medical College & Sir J.J. Group of Hospitals  
Mumbai 400 008, India

biopsy from one of the lesions on the face confirmed the diagnosis of molluscum contagiosum. After one month he developed meningitis, oropharyngeal candidiasis and watery diarrhoea. Laboratory investigations revealed a haemoglobin level of 9.6 gm/dl., white blood cell count of 3800/cmm with 34% lymphocytes and 66% of polymorphonuclear leucocytes, an erythrocyte sedimentation rate of 50mm at the end of one hour. CD4 count was 30 cells/cmm. An India ink preparation and culture of CSF was positive for *Cryptococcus neoformans*. A modified Ziehl-Neelsen stain on faecal smear showed acid fast oocysts of *Cryptosporidium* species. Sputum examination showed acid fast bacilli. A western blot for HIV-1 was positive. Cryptococcal meningitis improved with oral fluconazole 200 mg/12 hly. However inspite of clinical improvement repeated CSF examinations showed presence of cryptococci on India ink preparations.

Three months later a fresh lesion was observed on the face which was morphologically different from the earlier one.



Figure 1. Shows severe, aggressive molluscum contagiosum on eyelids. Arrow shows an associated creamish translucent papule on left cheek.

It was a creamish, translucent papule of 5mm size, the biopsy of which revealed numerous large eosinophilic, hyaline intracytoplasmic inclusion bodies within the epidermal cells which were characteristic of molluscum contagiosum. In addition, the epidermis showed presence of yeast form of fungi (Fig. 2 and 3).



Figure 2. Histology of cheek papule shows large eosinophilic molluscum bodies and a small cystic lesion in left side of epidermis (arrow) containing *Cryptococcus neoformans* (H & E original magnification X 200).

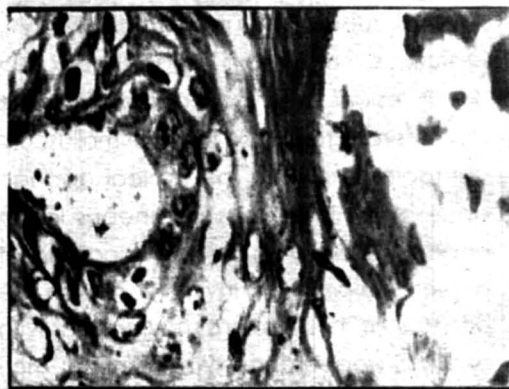


Figure 3. Higher magnification of figure 2 shows yeast forms of *Cryptococcus* in epidermal cystic lesion along with molluscum bodies (H & E original magnification X 900).

The dermis and subcutaneous tissue also showed colonisation by yeast cells. The yeast cells stained positively with PAS stain

and Gomori's silver methanamine (GMS) stain. Mucicarmine stain showed carminophilic capsular stain of the yeast cells, consistent with the diagnosis of cryptococcosis. Despite continued aggressive therapy, the skin lesions progressively increased in size and numbers, his CNS symptoms worsened and he died within a month. At autopsy there was widespread cryptococcal infection involving lymphnode, lung, spleen, gastrointestinal tract, kidney, thyroid, heart and brain. A single greyish white nodular lesion in liver showed histomorphology of liver cell carcinoma.

## Discussion

Molluscum contagiosum is a clinical disease caused by pox virus and is an important cutaneous marker of immunosuppression in HIV infected patients.<sup>1</sup> The prevalence of molluscum contagiosum in HIV infected persons ranges from 5% to 18%. In the presence of HIV infection molluscum contagiosum has an atypical presentation and course. The lesions are giant, hypertrophic especially in patients with extremely low CD4 counts.<sup>1</sup>

*Cryptococcus neoformans* is a ubiquitous encapsulated yeast found in soil, pigeon's excreta and some species of the eucalyptus tree in Australia. In immunocompromised patients wide spread organ involvement by *cryptococcus neoformans* is reported, of these 10% to 20% of patients have cutaneous in-

volvement.<sup>2</sup> The cutaneous manifestations of cryptococcosis are varied, lesions may appear as subcutaneous nodules, ulcers, cellulitis, palpable purpura, pyoderma gangrenosum - like ulcers, herpetiform lesions, KAPOSI's sarcoma-like lesions, molluscum contagiosum-like lesions and occasionally as basal cell carcinoma.

Cutaneous manifestations of cryptococcosis may occur before or after the onset of clinical CNS disease.<sup>3-5</sup> In this case cutaneous cryptococcosis presented as a late manifestation and was a part of disseminated disease. Rare reports of co-existent lesions of cutaneous cryptococcosis and kaposi's sarcoma have been documented.<sup>6,7</sup> However in the case presented here co-existent cutaneous cryptococcosis and molluscum contagiosum in the same biopsy is being documented for the first time. In some respect the histopathological findings identified in our case are different from the observations reported from other parts of the world. The microscopy of previously reported cases of cutaneous cryptococcosis showed presence of cryptococci in dermis and subcutaneous tissue without involvement of epidermis. However in our case cryptococci were demonstrated in the epidermis as well as in the dermis. Due to wide variety of skin lesions observed in patients with AIDS, a clinical diagnosis based strictly on cutaneous findings is almost impossible, hence study of cutaneous lesions by histopathology is warranted.

## References

1. Schwartz JJ, Myskowski PL. Molluscum contagiosum in patients with human immunodeficiency virus infection. *J Am Acad Dermatol* 1992; 27: 583-588.
2. Radentz W, Elewski BE. Opportunistic mycosis. In: *Cutaneous Fungal Infections*, Edited Elewski BE, Igaku Shoin Medical Publishers, New York 1992;191-192, 203-205.
3. Gauder JP. Cryptococcal cellulitis. *JAMA* 1977; 237: 672-673.
4. Hernandez AD. Cutaneous cryptococcosis. *Dermatol Clin* 1989; 7:269-274.
5. Shuttleworth D, Philpot CM, Knight AG. Cutaneous cryptococcosis: Treatment with fluconazole. *Br J Dermatol* 1989; 120:683-687.
6. Libow LF, Doberl D, Sibulkin D. Co-existent cutaneous cryptococcosis and kaposi's sarcoma in a patient with the acquired immunodeficiency syndrome. *Cutis* 1988;41:159 - 162.
7. Glassman SJ, Hale MJ. Cutaneous cryptococcosis and kaposi's sarcoma occurring in the same lesions in a patient with the acquired immunodeficiency syndrome. *Clin Exp Dermatol* 1995;20:480-486.