

Facial and perioral molluscum contagiosum as a manifestation of HIV infection

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Abstract

Molluscum contagiosum (MC) is a self-limiting viral disease of the skin and the mucous membranes. Facial and perioral MC is seen with increasing frequency in human immunodeficiency (HIV) infection, particularly in HIV infected homosexual men. The purpose of this study was to describe clinical observations of facial and perioral MC in HIV infected patients.

One hundred and eighty HIV-positive individuals (160 males and 20 females) were examined over a period of five years. Fifty-eight were homosexual men and 19 were bisexual men. Fifty-one of 180 patients at the time of the first examination had CD⁴ count <200 cells/mm³ and another 63 presented loss of CD⁴ cells in this level, during this period.

Three HIV infected patients (two homosexual and one bisexual) were affected with facial and perioral MC. At the time of MC diagnosis the CD⁴ count was less than 200 cells/mm³ for all three patients. One patient died nine months after MC diagnosis and the other two are still alive. It is remarkable that in this study no clinical lesions were observed on other sites of the skin.

Key words: Molluscum contagiosum, AIDS, HIV infection.

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Introduction

Molluscum contagiosum (MC) is a self-limiting viral disease of the skin and rarely of the mucous membrane.¹ MC is caused by a double-strand DNA virus of the poxvirus family represented by two strains named MCV-1 and MCV-2.²⁻⁴

The disease appears as single or multiple painless papules on the skin of healthy children (commonly

on the face, back, buttock, arms and rarely on the palms, soles or mucous membranes) or in the anogenital region of young adults.^{1,4,5} The papules have a dome-shaped aspect with a central pit which may be keratinized.

By adult life about 90 per cent of the population has antibodies, suggesting that infection is more common than clinical disease.⁶

Microscopically, the lesions reveal thickening and downgrowth of the epithelium with large eosinophilic intracytoplasmic inclusions bodies (Henderson-Paterson bodies). These bodies are accumulated in the crater-like centre of the lesion. This microscopic image is pathognomic for the disease.^{3,4,6}

Several cases of florid MC have been reported in immunocompromised patients, including those with human immunodeficiency virus (HIV) infection.^{4,5,7-10}

In this article the authors describe observations of facial and perioral MC in HIV infected patients.

Subjects and methods

The subjects of this study consisted of 180 consecutive outpatients with HIV infection (160 men and 20 women) who came to the Clinic of Infectious Disease at the 'AHEPA' General Hospital of Thessaloniki, Greece, for reassessment of their clinical and laboratory status and management, over a five year period. Fifty-eight of them were homosexual men and 19 were bisexual men. Fifty-one of 180 patients at the time of the first examination had CD⁴ count <200 cells/mm³ and another 63 presented loss of CD⁴ cells in this level, during this period. The final diagnosis of HIV infection in all patients was confirmed by Elisa and Western blot assays. Clinical assessment of the subjects was made according to the 1993 classifications of the CDC for HIV infection.¹¹

Patient 1

A 42 year old bisexual HIV-positive male presented with numerous painless papules on the skin of the

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face and perioral area (Fig. 1). The patient also had oral erythematous candidiasis (Fig. 2). At the time of diagnosis of MC, CD⁴ count was 150 cells/mm³ and the stage of infection was B3. The lesions occurred within a few weeks.

Microscopically, the lesions revealed a well-delineated endophytic and somewhat verrucoid mass, surfaced with an orthokeratotic acanthotic stratified squamous epithelium with a prominent granular layer. Numerous intracytoplasmic inclusions bodies were seen occupying the stratum spinosum and extending through the stratum corneum (Fig. 3, 4).

The patient died 9 months after MC diagnosis.

Patient 2

A 34 year old homosexual HIV-positive male showed several painless papules over the skin of the face, especially of the perioral area (Fig. 5). A tentative diagnosis of MC was rendered, and an excisional biopsy of one lesion was performed and submitted for histopathologic study. The microscopic image showed the features of MC. At the time of diagnosis of MC, CD⁴ count was 25 cells/mm³ and the stage of infection was B3. The patient was still alive one year after MC diagnosis and the CD⁴ count had ascended to 190 cells/mm³.

Patient 3

A 29 year old homosexual HIV-positive male presented with a small number of painless papules on the skin of the face (Fig. 6). The patient also had oral pseudomembranous candidiasis (Fig. 7). A biopsy of one lesion revealed MC. At the time of diagnosis of MC the patient had a CD⁴ count of 85 cells/mm³ and the stage of infection was B3. The patient was still alive two months after MC diagnosis.

None of the three patients received treatment for MC.

Discussion

In 1993, the EC-Clearinghouse on Oral Problems Related to HIV Infection and the WHO Collaborating Centre on Oral Manifestations of the Immunodeficiency Virus, revised the classification and the diagnostic criteria for the oral lesions in HIV infection.¹² According to this report, there are three groups of lesions associated with HIV infection. Group 1 includes lesions strongly associated with HIV infection, Group 2 includes lesions less commonly associated with HIV infection and Group 3 includes lesions seen in HIV infection. MC is included in Group 3.

The prevalence of facial and perioral MC among HIV infected individuals is variable. Alessi *et al.*¹³ found this lesion in 0.4 per cent of 516 HIV infected individuals and Barone *et al.*¹⁴ in 0.5 per cent of 217

HIV infected individuals or 0.7 per cent of 128 lesions. On the contrary, Matis *et al.*¹⁵ reported an increased prevalence (18 per cent of 34 patients). According to the results of the current study, the prevalence of facial and perioral MC in HIV infected individuals is low (1.7 per cent of 180 individuals). It is remarkable that in this study no clinical lesions were observed on other sites of the skin.

In HIV infection MC is seen with increasing frequency in homosexual men.^{4,10} In the present study two of the three patients were homosexual and the other bisexual.

The immunopathogenesis of MC is not completely understood. Infection can follow inoculation through even superficial damage to the epithelium. The prickle cell and basal cell layer contains eosinophilic inclusions. The basal layer undergoes proliferation and there is acanthosis, with a hyperplastic infolded epithelium. Impaired immunity, such as in AIDS, is associated with a much higher risk in widespread lesions.⁶ It has been hypothesized that MCV is able to stimulate cell proliferation, presumably through a secreted viral protein.^{3,4} In recent years, attention has been given to a growth factor peptide, which might cause basal epidermal cells to proliferate in lesions of MC.^{4,16}

It has been observed that the strain MCV-2 has a proclivity for afflicting HIV infected persons.^{3,4}

MC is a late manifestation of HIV infection and mirrors marked cellular immune deficiency. It has been found that in HIV infection, MC mainly develops in association with severe CD⁴ depletion and appears in an advanced stage of infection.^{4,10,17-19} A negative prognostic significance of MC for the life of patients has been reported. Ficarra *et al.*⁴ found that, at the time of diagnosis of MC, eight patients had a median CD⁴ count of 41 cells/mm³ and seven of them died between five and 14 months after MC diagnosis (on average nine months). In the present study the three patients had CD⁴ cells <200 cells/mm³ and one of them died nine months after MC appearance. However, the other two patients were still alive one year (Patient 2) and two months (Patient 3) after MC diagnosis. One patient presented recovery of the CD⁴ count and amelioration of the clinical picture. At the time of MC diagnosis, the stage of infection for the three patients was B3.

Diagnosis of MC is readily made because of its distinctive clinical and pathognomic histopathological aspects. The clinical picture of MC can be expected to behave atypically and had been confused clinically with other diseases, such as basal cell carcinoma, keratoacanthoma, eccrine poroma, etc.^{3,4,20} In HIV-positive patients, cases of fungal infection such as cryptococcosis and histoplasmosis with clinical features of MC have led to erroneous initial diagnoses of MC.^{1,4,5,21} Additionally, Itin and Gilli reported that

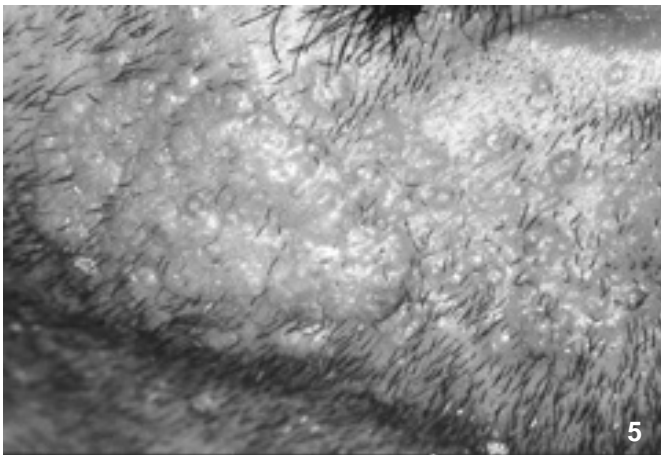
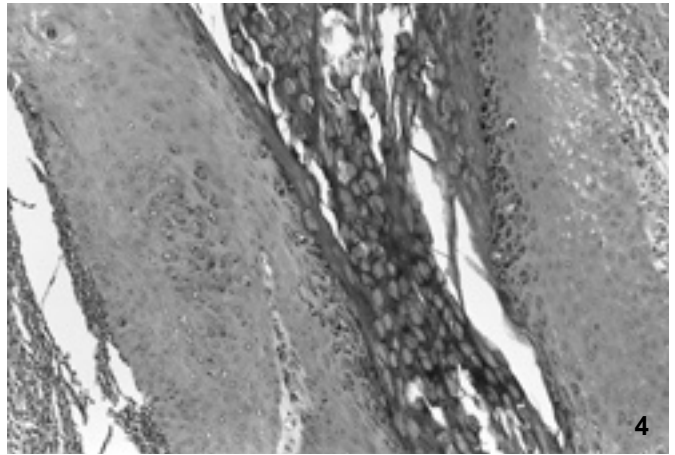
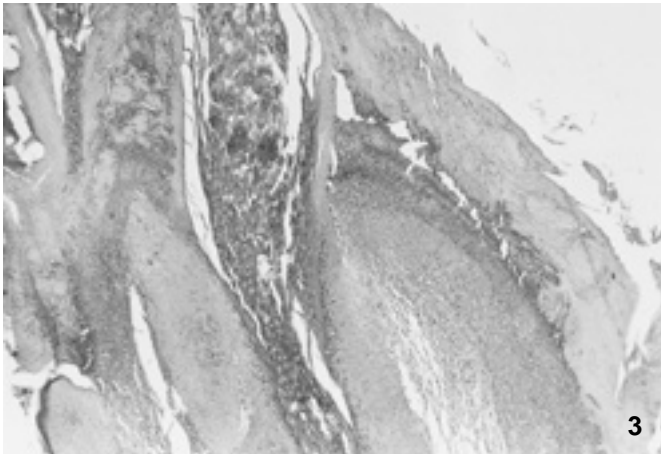
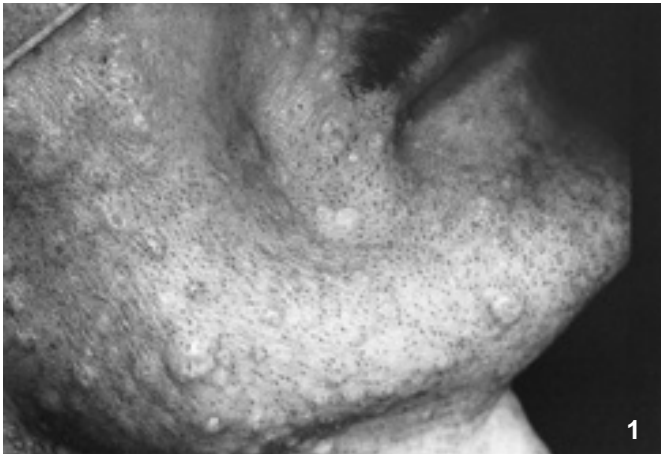


Fig. 1. – Facial and perioral multiple lesions of molluscum contagiosum of Patient 1.
Fig. 2. – At the time of diagnosis of molluscum contagiosum Patient 1 had oral erythematous candidiasis.
Fig. 3. – Low power view of molluscum contagiosum exhibiting epithelial hyperplasia and central umbilication. H&E $\times 40$.
Fig. 4. – High power view of molluscum contagiosum. Note the presence of large eosinophilic intracytoplasmic viral bodies (Henderson-Paterson inclusions). H&E $\times 120$.
Fig. 5. – Dissemination of molluscum contagiosum over the skin of the face and the perioral area of Patient 2.
Fig. 6. – Lesions of molluscum contagiosum on the skin of the face of Patient 3.
Fig. 7. – Pseudomembranous candidiasis in Patient 3.

MC mimics the sebaceous naevus of Jadassohn, ecthyma and giant condyloma in HIV infected patients.¹⁸

Although there is eventual spontaneous resolution, treatment may be sought for cosmetic reasons. Local chemical treatment with silver nitrate, trichloroacetic acid or tretinoin cream, cryosurgery, carbon dioxide laser, curettage, surgical excision or electrosurgery all have their advocates.^{4,6,22} Systemic antiviral therapy directed against the poxvirus family is not currently available. It has been reported that azidothymidine may influence resolution of MC associated with HIV infection.²³

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