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Giant Molluscum Contagiosum Opportunistic Infection in a HIV/AIDS Patient

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ABSTRACT

Atypical types of molluscum contagiosum (MC), which are present in immunocompromised patients and show substantial weakening of cellular immunity, can be difficult to diagnose. Low CD4 cell counts are associated with MC lesions, which are most frequently seen in HIV patients. We report MC lesions in the trunk and lower extremities in a 40-year-old HIV-positive female patient. A 75 cells/mm CD4 count was present in the patient. To rule out more dangerous disorders including dimorphic fungal infections, a skin biopsy was performed. The hypogastrum of the trunk and vulva were affected by the lesions which were painless, flesh-colored papules and nodules. Syphilis and hepatitis B virus testing came out negative, while serological tests for HIV-1 were positive. Intracytoplasmic molluscum bodies were detected in the skin biopsy. However, the opportunity for an early diagnosis in our case was lost.

Keywords: HIV/AIDS related opportunistic infections, immunosuppression, Molluscum contagiosum, skin biopsy.

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I. Introduction

A double-stranded DNA virus (family Poxviridae) that replicates in the human epidermis and increases the expression of the epidermal growth factor receptor causes the most common viral disease, Molluscum contagiosum (MC), which is self-limiting and benign [1]. There are two incidence peaks for the disease: one occurs in the first five years of life (1–5), and the other occurs in sexually active young adults [2].

2 to 3 months following the initial virus exposure, flesh-colored papular lesions with a central umblication start to emerge. Individual lesions are frequently larger than typical (3 to 5 mm) and may reach as much as 15mm when the infection is referred to as "giant molluscum contagiosum," which can be seen in almost any immunodeficiency condition, such as corticosteroid and immunosuppressive therapy, leukaemia, atopic dermatitis, Wiskott-Aldrich syndrome, sarcoidosis, anaemia, and others [1], [3]. There may be several lesions, and they could group together to form nodules and larger aggregates [1]. The disease generally affects the face and trunk, whereas in immunocompetent adults it typically affects the genital region [3].

II. Case Presentation

A 40-year-old woman who had dermatosis that had spread throughout her lower extremities and hypogastrium for six months visited our department. The dermatosis was bilateral and asymmetrical, affecting the internal face of the lower extremities, the thighs, and both the hypogastrium of the trunk and vulva. The dermatosis had a monomorphic appearance and was composed of numerous hemispherical erythematous neoformations that were 8–12 mm in diameter, had a smooth surface, some of which had central umblications, a tendency to merge, and had an ongoing, asymptomatic evolution (Fig. 1). She identified as unmarried, heterosexual, and having had 4 unprotected sexual partners in her past. She disclaimed having had surgery, blood transfusions, drug and alcohol addictions, and chronic degenerative disorders in the past.

Hematic cytometry and blood chemistry assays were performed in the laboratory. Leukopenia was detected at 4.2 k/µl on the whole blood count, although erythrocyte counts were normal at 4.5 M/µl, platelet counts were 298 k/µl, and haemoglobin levels were 13 g/dl. A manual blood smear revealed 65% neutrophils and 26% lymphocytes. With the exception of bilirubin, all liver function tests were abnormal. The activity of alanine and aspargine aminotransferases were 55 and 60 IU/ml, respectively. The amount of γ-

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glutamyl transferase activity was 274 IU/M. The total bilirubin concentration was 0.5 mg/dl. Blood urea nitrogen and creatinine were within acceptable limits. The amount of total protein in the serum was 8.8 g/dl. At 75 cells/mm^3, the CD4+T-cell count was noticeably low. While tests for the VDRL and Hepatitis B virus were negative, an ELISA test for HIV was positive and western blotting confirmed this finding. The extensive proliferation of Candida albicans was confirmed by throat culture.

Fig. 1. Hemispherical erythematous neoformations (8–12 mm in diameter) having smooth surface and some of which present with central umblications.

A skin biopsy was carried out with the presumed diagnosis of likely molluscum contagiosum. Mollusc bodies arranged in lobular formations were observed during the biopsy (Fig. 2). The patient was referred to an HIV/AIDS management facility for further assessment and treatment. However, two weeks later, the patient perished away due to cancer of the gastric region.

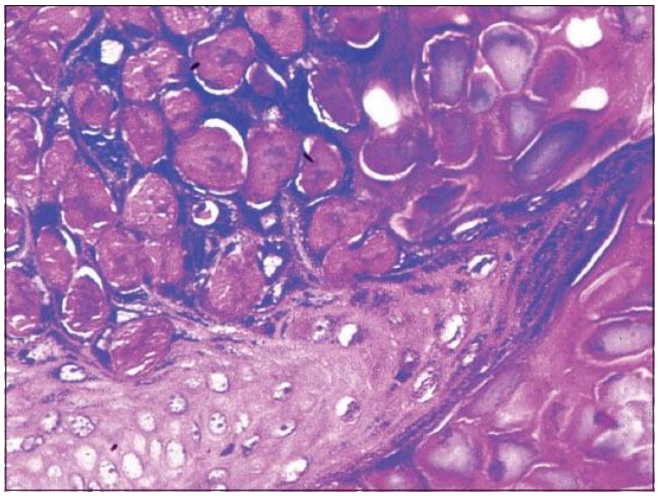

Fig. 2. Skin biopsy showing lobular formations of the mollusc bodies.

III. Discussion

In case of opportunistic MC virus (MCV) infection, there are 4 distinct genotypes of this virus: MCV1, MCV2, MCV3, and MCV4. MCV1 is the genotype with the highest frequency (75–96%), followed by MCV2, while MCV3 and 4 are quite uncommon [5]. MCV1 infection is more common in youngsters, whereas MCV2 is more common in people with HIV. Patients with a diagnosis of MC over the age of 18 have a nearly 4-fold higher chance of contracting HIV than those with other dermopathy.

In patients with HIV infection, lesions spread rapidly and do not appear to be healing [2]. One significant feature of lesions linked to HIV/AIDS is that some of them are linked to the progression of the illness. In other words, it has been shown that HIV patients with these lesions, like our patient, progress to the AIDS stage earlier when candidiasis and hairy leukoplakia occur. Whether the lesions are typical or atypical affects the diagnosis of MC. Simply observing the umblicated papules in the former type is sufficient. However, in atypical lesions, diagnosis can be made using histopathology, molecular diagnosis by in-situ hybridization, flourescent antibody test, and PCR [4]. In addition to opportunistic infections like cryptococcus or histoplasmosis with cutaneous compromise, differential diagnoses include basal cell carcinoma, keratoacanthoma, cutaneous horn, warts, varicella, intradermal nevi, lichen planus, and warts [3–4].

Although the autoresolutive course of a lesion in immunocompetent patients lasts about 2 months, treatment should be considered if the risks of leaving a lesion untreated outweigh those of the side effects. The treatment options include curettage, cryotherapy, trichloroacetic acid 100% solution, salicylic acid gel 12%, retinoic acid 0.5% cream, among others [2]. It is suggested that the measles, mumps, and rubella (MMR) vaccine is efficacious on the basis of cell-mediated immunity acting in the pathogenesis of MC [4].

Any AIDS patient with cutaneous lesions should be evaluated for MC, especially if chronic nature is evident and no typical lesions are present. Therefore, the primary concern should be the need for directed treatment by a dermatological specialist or an expert in infectious diseases.

Conflict of Interest

The authors declare they have no conflict of interest.

Ethical Approval

Not applicable.

Informed Consent

Written informed consent was obtained from the patient for the publication of the manuscript.

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