Dermoscopic Features of Giant Molluscum Contagiosum in a Patient with Acquired Immunodeficiency Syndrome

Giant molluscum contagiosum (MC) is a peculiar variant of the disease with the presence of multiple or single lesions larger than 5 mm. In contrast to typical molluscum contagiosum, dermoscopic features of giant lesions have been poorly described, and none of the reports included multiple giant lesions in an immunocompromised patient. We present a patient with acquired immunodeficiency syndrome diagnosed with multiple giant molluscum contagiosum along with the dermoscopic features of this entity.

We examined a 40-year-old patient who had been diagnosed with acquired immunodeficiency syndrome (AIDS) two months earlier. The disease defining AIDS was cerebral toxoplasmosis (initially presenting as a brain tumor several months earlier). Laboratory investigation showed a decreased CD4 cell count of 11 cells/mm^3 and HIV viral load of 252 472 copies/mL. The patient was referred to the Department of Dermatology due to multiple flesh-colored, asymptomatic nodules with superficial telangiectasia that had been observed on the face for several weeks (Figure 1, a). Dermoscopy of larger (>5 mm) skin lesions showed yellowish globules of different size and random distribution, separated by smaller, oval-shape white globules and polymorphic vessels (Figure 1, b-d). Dermoscopy of smaller skin lesions showed the presence of a central yellow globule and white structureless area with irregular linear vessels of radial arrangement at the periphery (Figure 1, e). Histopathological examination confirmed the diagnosis of molluscum contagiosum (MC); special staining showed the details of the lesion (Figure 2, a-c).

Antiretroviral therapy with Triumeq® (dolutegravir + abacavir + lamivudine) was initiated. After discussing MC treatment options with the patient, we decided to delay the treatment and wait for the effect of antiretroviral therapy. Partial regression of MC lesions was observed after 5 months; laboratory investigations showed a CD4 cell count of 99 cells/mm3 and a HIV viral load of 56 copies/mL. Along with continuation of antiretroviral therapy, the patient received treatment with topical imiquimod (Aldara®) for 12 weeks. Subsequently, a few lesions resistant to previous treatment were treated with cryosurgery and the patient was instructed to apply imiquimod only to new-onset/regrowing lesions. Clinical evaluation

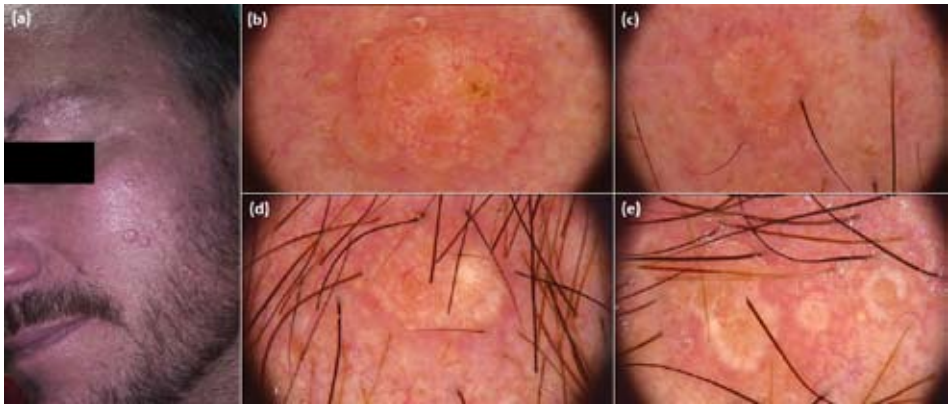

Figure 1. (a) Clinical presentation: multiple, randomly distributed, flesh-colored, asymptomatic facial nodules. In contrast to larger (>5 mm) lesions, some of the smaller ones reveal the presence of central umbilication. (b-e) Dermoscopy of giant molluscum contagiosum shows the presence of large yellowish globules surrounded with white smaller globules/white structureless areas with polymorphic vessels (branched, dotted, linear irregular). Dermoscopy of two smaller lesions shows the presence of a central yellow globule and white structureless area with irregular linear vessels of radial arrangement at the periphery.

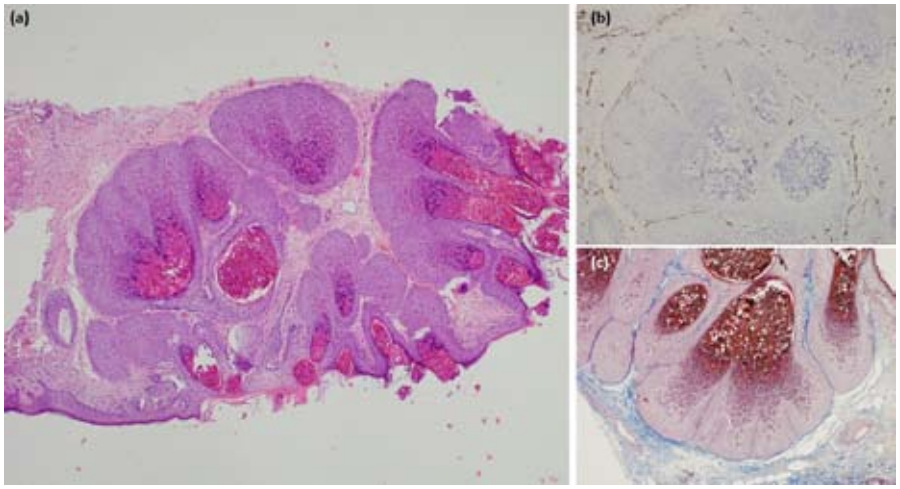

Figure 2. Histopathological picture: (a) Circumscribed intradermal tumor made of lobulated, endophytic, and mainly infundibular epidermal hyperplasia with papillomatosis. Some parts of the hyperkeratotic epidermis contain intracellular eosinophilic and basophilic inclusions (molluscum bodies) being released into the crypts. No inflammation is present (hematoxylin and eosin, ×40) (b) Blood vessels tightly surrounding inverted hyperplastic epidermal lobules, dilated in the periphery and the central part of the lesion (immunohistochemistry CD34, ×100). (c) Collagen fibers pressed and condensed between lobules of the tumor and highlighted molluscum bodies (Masson trichrome staining, ×100)

after 2 months revealed a good clinical and aesthetic effect (Figure 3).

MC is a viral disease caused by a DNA virus of the Poxviridae family (MCV-1 or MCV-2). The infection most commonly affects children and sexually active adults, and may be diagnosed based on physical examination in the majority of cases. Typical clinical presentation includes single to multiple, 2-5 mm, flesh-colored, asymptomatic nodules with central umbilication.

Dermoscopy is a non-invasive diagnostic method that allows skin examination with magnification, therefore improving the accuracy of dermatological diagnosis. It was primarily developed to detect melanoma, but in recent years the role of this method in general dermatology has been constantly increasing.

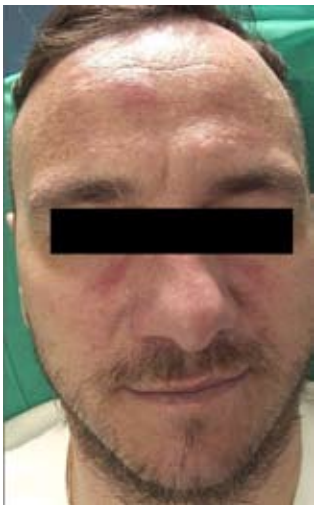

Figure 3. Clinical presentation after treatment.

There have been several published reports that demonstrated the utility of dermoscopy in the diagnosis of MC. Most commonly observed structures include a central orifice and blood vessels arranged in punctiform, radial or mixed flower pattern (1). Giant molluscum contagiosum is an atypical variant of the disease, with the presence of multiple or single lesions larger than 5 mm (2). The diagnosis of giant MC usually indicates immunodeficiency and has been mainly described in HIV-positive patients, but also in coexistence with leukemia, sarcoidosis, Wiskott-Aldrich syndrome, selective immunoglobulin M deficiency, atopic dermatitis, and after splenectomy, bone marrow transplantation, and during immunosuppressive therapy (3). Giant MC may mimic other benign or malignant dermatoses, and the final diagnosis is usually based on histopathological examination. The list of differential diagnoses is long and includes basal cell carcinoma, keratoacanthoma, viral wart, varicella, intradermal nevi, pyogenic granuloma, lichen planus, atypical mycobacterial infection, pneumocystosis, cutaneous cryptococcosis, and histoplasmosis (3). In contrast to typical MC, dermoscopic features of giant MC have been poorly described, and none of the reports included multiple lesions in immunocompromised patient. Mun *et al*. described a pattern of multiple shiny white clods in giant MC observed in a 2-year-old girl in the perianal area (4). A different dermoscopic image – with prominent arborizing vessels and polylobular white structureless areas – was reported by Uzuncakmak et al., who described giant MC on the eyelid in a 25-year-old woman (2). Similar dermoscopic features of atypical MC (5 mm in size) were described by Zaballos et. al. (5).

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The course and treatment of MC differ in immunocompetent and in immunocompromised individuals. While the infection is usually mild and self-limiting in the former group, in the latter it may be extensive, symptomatic, and resistant to therapy. Treatment methods commonly applied in immunocompetent patients such as cryotherapy, curettage, and electrocautery are not generally recommended in patients with severe immunodeficiency as they pose a risk of secondary infection or autoinoculation (6). Additionally, such treatment of multiple lesions is connected with pain and higher risk of postinflammatory changes/scarring (7). According to the literature, treatment with local immunomodulators – including imiquimod cream, interferon-a (IFN-a) injections and cidofovir – appears to be effective (6). Topical 5% imiquimod was most commonly used, and although not licensed for this indication it was shown to be effective in HIV-positive individuals, including treatment of giant MC lesions (7). Regardless of the topical treatment, previous reports documented a correlation between immunity status and the extension of MC lesions. Therefore, effective antiretroviral therapy may itself lead to resolution of MC [8].

To sum up, the presented report introduced additional observations into the dermoscopic spectrum of giant MC. The observed dermoscopically large yellowish globules seem to correspond with the crypts and the surrounding white structures with the areas of lobulated, endophytic epidermal hyperplasia. The presence of vascular structures in dermoscopy corresponds with the blood vessels tightly surrounding inverted hyperplastic epidermal lobules (**Figure 2**, b). Dermoscopic features od giant MC are different than those observed in small lesions. Interestingly, the dermoscopic appearance of smaller lesions observed in our patient seemed to be similar to MC eruptions described in immunocompetent patients (1). In case of clinical suspicion giant MC coexisting with smaller lesions, dermoscopic assessment of the latter may serve as a clue to diagnosis.

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