Molluscum contagiosum eruption during therapy with methotrexate and abatacept: A clinical and dermoscopic case study

Franca Taviti,[1] Alessandra Calcinai,[2] Federica Scarfì[1]

[1]UOSD Dermatology, USL Toscana Centro-Prato Hospital, Prato; [2]UOSD Pathology, USL Toscana Centro-Pescia Hospital, Pistoia, Italy

Abstract

The use of multiple drugs acting as modulators of the immune system are common among patients with severe autoimmune diseases. In these clinical scenarios, great attention should be placed on diagnosing infective cutaneous disorders that can underly iatrogenic immunosuppression. Here within, we report a rare case of molluscum contagiosum eruption on the face and the scalp during an immunomodulating treatment for rheumatoid arthritis, with clinical and dermatoscopic characterization.

Introduction

Molluscum contagiosum (MC) is a benign cutaneous infection due to a virus of the Poxviridae family. MC is transmitted by direct skin contact, and it usually occurs in children or, due to sexual transmission, in adults. In patients without immune system impairments, it tends to resolve spontaneously in a time ranging from months to years.[1]

Persistent, recurrent, difficult-to-treat and clinically atypical MC infections are commonly found among immunocompromised patients. Although it is uncommon, the burden of this disease is probably underestimated.[2] Some reported diseases associated with MC in adults are acquired immune deficiency syndrome, solid organ transplants, systemic lupus erythematosus, sarcoidosis, neoplasia, immunosuppressive and biologic therapy.[3]

Case report

A 70-year-old woman with a severe form of rheumatoid arthritis was admitted to our outpatient clinic due to a two-month history of facial eruption. Three months before, she had started therapy with methotrexate (12.5 mg weekly) in addition to Abatacept (750 mg monthly) due to unresponsiveness. She also has a past medical history of cerebral meningioma cured with surgery. The patient was also under medication with bisoprolol fumarate and pilocarpine hydrochloride, respectively, for hypertension and Sjogren syndrome for more than four years. At the time of our evaluation, the patient was experiencing partial control of the autoimmune diseases.

Clinical examination revealed some pearly pink umbilicate papules in the face, especially in the nasal bridge and on the left eyebrow area. Most of them located in the central part of the face was excoriated (Figure 1). Some hemispheric flesh-colour lesions were present also in the vertex area of the scalp (Figure 2).

No other lesions were found on the skin and visible mucosa. The dermatoscopic examination of the scalp revealed a 5 mm papule with central orifice and crown vessels (Figure 3). Complete blood count, including white cell and differential, was within the standard limits.

Histopathological examination of one lesion showed subcorneal cyst and intracytoplasmatic inclusion bodies (the *molluscum bodies*) connected with the epidermal surface. Together with clinical and dermatoscopic aspects, these features were consistent with the diagnosis of MC infection. The patient was treated with local cauterization. The immunosuppressive treatment had not been interrupted or replaced, and recurrences were observed at a six-month follow-up visit.

Discussion and conclusions

The diagnosis of MC is mainly clinical, although dermatoscopy can help highlight the presence of vessels and lesional orifices,[4] especially among immunocompromised patients, in which skin lesions may display atypical features.

Nevertheless, in case of suspected immune impairments, the histopathological examination is mandatory to exclude other opportunistic cutaneous infections that can mimic MC, such as penicilliosis and cryptococcosis, coccidioidomycosis, aspergillosis and sporotrichosis.[5] There are few cases reported of MC during treatments for rheumatoid arthritis.[6-8] To the best of our knowledge, this is the first case of MC eruption during coadministration of methotrexate and Abatacept for rheumatoid arthritis with scalp involvement.

Since immunosuppressive drugs use combined with immunomodulatory therapy increases, we maintain the importance of considering MC as a clinical signal of depressed CD4+ T-cell count, especially when clinically extensive. In these iatrogenic immunosuppression cases, a change

Correspondence: Federica Scarfì, Dermatology, UOSD Dermatologia, USL Toscana Centro-Prato Hospital
Piazza Ospedale, 5, 59100 Prato, Italy.
Tel.: +390574 807330
E-mail: scarfif@gmail.com.

Key words: Molluscum contagiosum, Immunomodulating therapy, Dermoscopy.

Contributions: FT had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: FT, FS. Acquisition of data: FT, AC, FS. Analysis and interpretation of data: FT, AC, FS. Drafting of the manuscript: FT, AC, FS. Critical revision of the manuscript for important intellectual content: FT, FS. Study supervision: FT.

Conflict of interest: The authors declare no potential conflict of interest.

Funding: None.

Ethical approval: Local ethics committee approved the study.

Informed consent: The patient gave written consent to study.

Availability of data and material: Data and materials are available by the authors.

Please cite this article as: Taviti F, Calcinai A, Scarfì F. Molluscum contagiosum eruption during therapy with methotrexate and abatacept: a clinical and dermoscopic case study. Dermatol Rep 2022;14:9259.

Received for publication: 9 May 2021.
Accepted for publication: 4 December 2021.

Dermatology Reports 2022; 14:9259
doi:10.4081/dr.2022.9259

in the therapeutic regimen should be considered to avoid other more severe opportunistic infections and treat the MC.[7] Due to the extreme disability from rheumatoid arthritis and the mild nature of the MC infection, the replacement of therapy was not performed in our patient.

Figure 1. Clinical image of some pink umbilicate papules located in the nasal bridge and on the left eyebrow area. On the central part of the face, some excoriated lesions.

Figure 2. Clinical image of a molluscum contagiosum in the vertex area of the scalp.

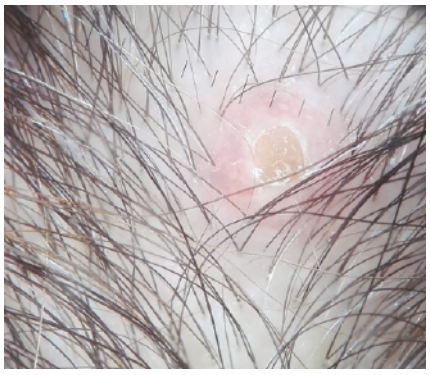

Figure 3. Dermoscopic image (20X) of one 5 mm papule of the scalp with the typical central orifice surrounded by crown vessels.

References

1. Edwards S, Boffa MJ, Janier M, et al. European guideline on the management of genital molluscum contagiosum. J Eur Acad Dermatol Venereol 2021;35:17-26.
2. Chen X, Anstey AV, Bugert JJ. Molluscum contagiosum virus infection. Lancet Infect Dis 2013;13:877-88.
3. Beutler BD, Cohen PR. Molluscum contagiosum of the eyelid: case report in a man receiving methotrexate and literature review of molluscum contagiosum in patients who are immunosuppressed secondary to methotrexate or HIV infection. Dermatol Online J 2016;22:13030.
4. Ianhez M, Cestari Sda C, Enokihara MY, Seize MB. Dermoscopic patterns of molluscum contagiosum: a study of 211 lesions confirmed by histopathology. An Bras Dermatol 2011;86:74-9.
5. Annam V, Inamadar AC, Palit A, Yelikar BR. Co-infection of molluscum contagiosum virus and cryptococcosis in the same skin lesion in a HIV-infected patient. J Cutan Pathol 2008;35:29-31.
6. Madan V, August PJ. Facial molluscum contagiosum in a patient with rheumatoid arthritis taking methotrexate. Clin Exp Dermatol 2008;33:347.
7. Nakamura-Wakatsuki T, Kato Y, Miura T, Yamamoto T. Eruptive molluscum contagiosum in a patient with rheumatoid arthritis and lung cancer. Rheumatol Int 2011;31:1117-8.
8. Bansal S, Relhan V, Roy E, et al. Disseminated molluscum contagiosum in a patient on methotrexate therapy for psoriasis. Indian J Dermatol Venereol Leprol 2014;80:179-80.
9. Wetzel M, Tidwell WJ, Callen JP. Disseminated molluscum contagiosum associated with immunomodulatory therapy. JAAD Case Rep 2020;6:708-9.