Dermoscopy of tinea incognito.

Authors and affliliations: Massimo Dell'Antonia [1], Cristina Mugheddu [1], Lorenzo Ala [1], Danila Lai [1], Luca Pilloni [2], Caterina Ferreli [1], Laura Atzori [1]

[1] Dermatology Clinic, Department of Medical Sciences and Public Health, University of Cagliari (Italy).

[2] Pathology Service, Department of Medical Sciences and Public Health, University of Cagliari, Cagliari, Italy

Corresponding author: Massimo Dell'Antonia, Dermatology Clinic, Department of Medical Sciences and Public Health, University of Cagliari, Via Ospedale 54, 09124, Cagliari, Italy. Email: massimodellantonia@gmail.com.

Keywords: tinea incognito, dermoscopy, yellow dots, tinea, kerion, terbinafine

Total words: 543

Total figures: 1

Total talbes: 0

Running head: Dermoscopy of tinea incognito

All authors state that the manuscript is original, it has not been published before and it is not currently being considered for publication elsewhere.

All authors contributed equally to the manuscript preparation and revised the final version.

Conflict of interest: none.

Funding: none.

The patient have given written informed consent to publication of this manuscript.

Tinea incognito (TI) is a dermatophytic infection with a clinical presentation modified by a previous inadequate treatment with topical or systemic corticosteroids. It typically develops when a tinea corporis is misdiagnosed as cutaneous inflammatory disease, such as psoriasis or eczema, and consequently treated inappropriately. TI can be challenging to diagnose because the clinical presentation is relatively non-specific.

Dermoscopy is an useful and non-invasive diagnostic tool for improving the diagnostic accuracy of several skin disorders. In addition to its traditional use for the evaluation of skin tumors, dermoscopy is making its way in other fields of dermatology, such as inflammatory and infectious diseases. Over the last years a few papers have been published concerning the dermoscopy of dermatophytic infections, in particular tinea capitis and onychomycosis, but there is paucity of articles regarding dermoscopy of TI.

We describe here a case of a 45-year-old man with a 4-month history of an itchy plaque on the left knee. The lesion was previously diagnosed as psoriasis and unsuccessfully treated with topical corticosteroids. Physical examination showed a round, hairless, erythematous plaque, minimally scaling, measuring 7 cm in diameter (Figure 1a). Dermoscopic examination under polarized light revealed an unspecific vascular pattern, a central orangish background and numerous yellow dots of different sizes surrounded by a white halo (Figure 1d,1e). Firstly we performed a skin biopsy and histopathological examination showed the presence of hyphae, epidermal hyperplasia and a dense histiocytic and neutrophilic infiltrate (Figure 1b). Then we performed a skin scraping: a part of the sample was used for potassium hydroxide microscopic examination, which showed numerous hyphae (Figure 1c),and a part of the sample for culture, which isolated Trichophyton mentagrophytes. Clinical and pathological findings led us to the diagnosis of inflammatory dermatophytosis. The patient was treated with terbinafine 250mg DIE and complete resolution was obtained after 4 weeks of treatment. We have described herein a case of TI, with a marked inflammatory presentation, highlighting its dermoscopic features.

To date only four papers concerning dermoscopy of TI have been published and the dermoscopic features described are: hair changes (broken, bent, morse-code, comma, cork-screw, easily deformable and translucent hairs), perifollicular scales and casts, patchy erythema, dotted vessels, aspecific vascular pattern, follicular micropustules and black dots.

Interestingly, most of the demoscopic features reported in literature are a consequence of fungal invasion of the hair, that lead to deformation and cracking of the hair. The dermoscopic features we found are different from the previously reported, as our case was characterized by a severe inflammation, but still consequence of hair involvement. The presence of yellow dots, which are commonly found in inflammatory scalp diseases, such as alopecia areata, chronic cutaneous lupus erythematosus and dissecting cellulitis, can be explained as the complete destruction or loss of the hair, due to dermatophyte invasion, and subsequent follicular plugging. Conversely, the orangish background observed in the center of the lesion is probably due to the dense inflammatory infiltrate rich in histiocytes.

This is apparently the first description of dermoscopy of tinea incognito presenting in a severe inflammatory form. It is important to keep in mind that tinea incognito might present in this form and the dermoscopic features we reported, including absence of hairs and presence of yellow dots on a orangish vascular background, may be helpful in the diagnosis.

FIGURES:

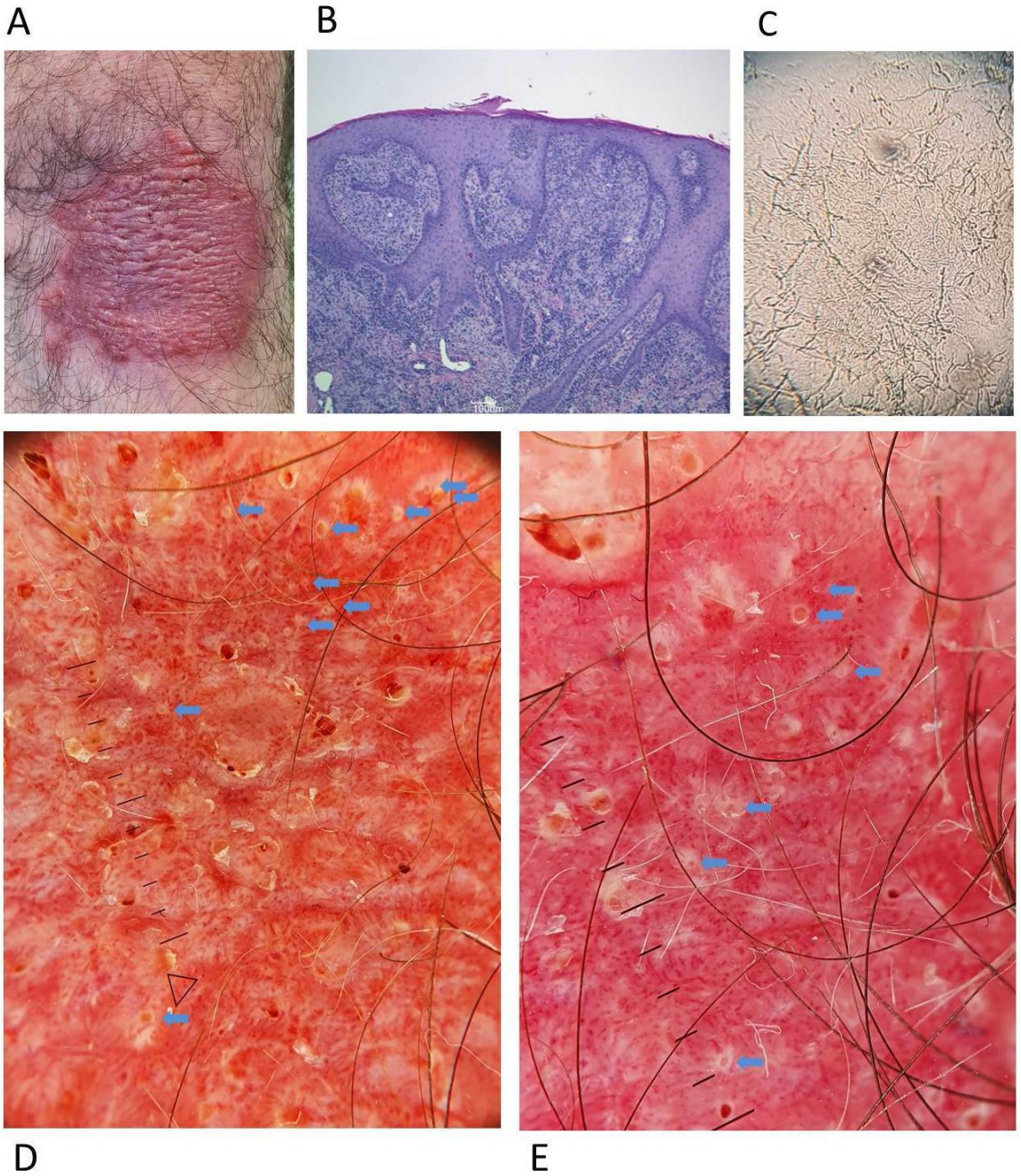

Figure 1. Round, hairless, erythematous plaque of left keen, minimally scaling, measuring 7 cm in diameter.(a) Skin biopsy shows epidermal hyperplasia and a dense histiocytic and neutrophilic infiltrate, hematoxylin and eosin, original magnification x4. (b) Potassium hydroxide microscopic examination of skin scraping shows numerous hyphae. (c) Dermoscopic examination under polarized light reveals yellow dots surrounded by a white halo (blue arrow), erythema, unspecific vascular pattern (d,e), and orangish background in the center of the lesion (d).