We present this case given the unusual clinical presentation and highlight the importance of cutaneous alterations in the diagnostic confirmation of this entity.

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Authors' contributions

Catalina Jahr: Approval of the final version of the manuscript; composition of the manuscript; collection, analysis, and interpretation of data; participation in the design of the study; critical review of the literature; critical review of the manuscript.

Valentina Vera: Approval of the final version of the manuscript; collection, analysis, and interpretation of data; critical review of the manuscript.

Roberto Bustos: Approval of the final version of the manuscript; collection, analysis, and interpretation of data; critical review of the manuscript.

José Contreras: Approval of the final version of the manuscript; collection, analysis, and interpretation of data; critical review of the manuscript.

Conflicts of interest

None declared.

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Generalized nodular tinea profunda in an immunosuppressed patient caused by *Trichophyton rubrum*☆

Dear Editor,

We report the case of a 65-year-old man with generalized subcutaneous nodules with intense pruritus for 1 year (Fig. 1). He had a history of diabetes mellitus for 7 years, hypertension and chronic kidney disease for 5 years, and Bullous Pemphigoid (BP) for 2 years. Systemic glucocorticoid (oral prednisone 25 mg twice a day) was prescribed to treat his BP for more than 1 year.

After admission, blood test for fungal glucan was 213 pg/mL (the normal is lower than 60 pg/mL), which indicated a deep fungal infection. Blood culture for fungi was negative, and no lymphadenopathy was detected by ultrasonography. The light microscopy showed epidermal hyperplasia, dermal abscess, and infiltration of neutrophils, lymphocytes, epithelioid cells, and scattered multinucleated giant cells (Fig. 2A). Intracellular hyphae were observed in multinucleated cells in the granuloma (Fig. 2B). The skin sample was also sent for Next Generation Sequencing (NGS) to identify the pathogen. The NGS reported *Trichophyton rubrum* nucleotide sequences (Cover rate: 0.0199%) in DNA extracted from the skin specimen. Considering the patient's clinical and histological manifestations, and the notable high sequencing reads compared to a negative control, we established the diagnosis of generalized nodular tinea profunda caused by *Trichophyton rubrum*. Oral therapy with 250 mg terbinafine per day was initiated and the nodules regressed completely after 3 months.

Trichophyton rubrum often causes superficial dermatomycosis, such as tinea manus, tinea pedis and tinea corporis. But in very few cases, *T. rubrum* penetrate into the dermis

☆ Study conducted at the Department of Dermatology, The Second Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, China.

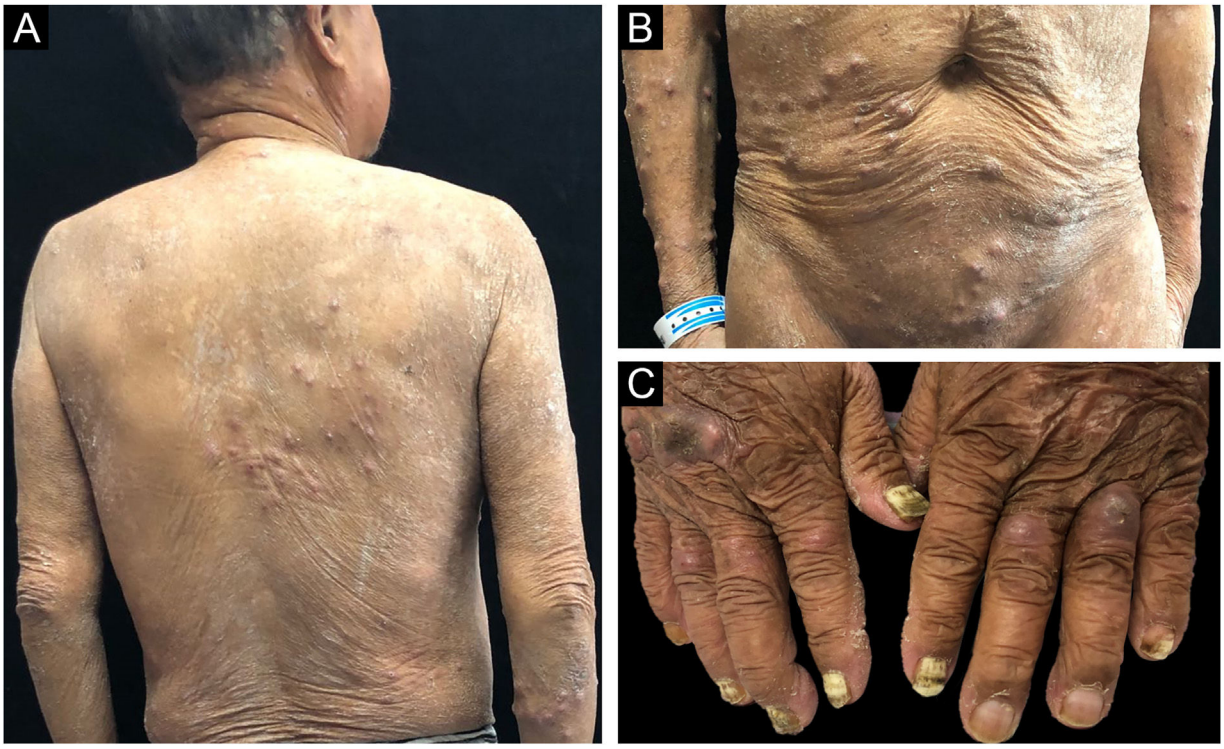

Figure 1 Clinical aspect: (A–C) Multiple papules and subcutaneous nodules and onychomycosis.

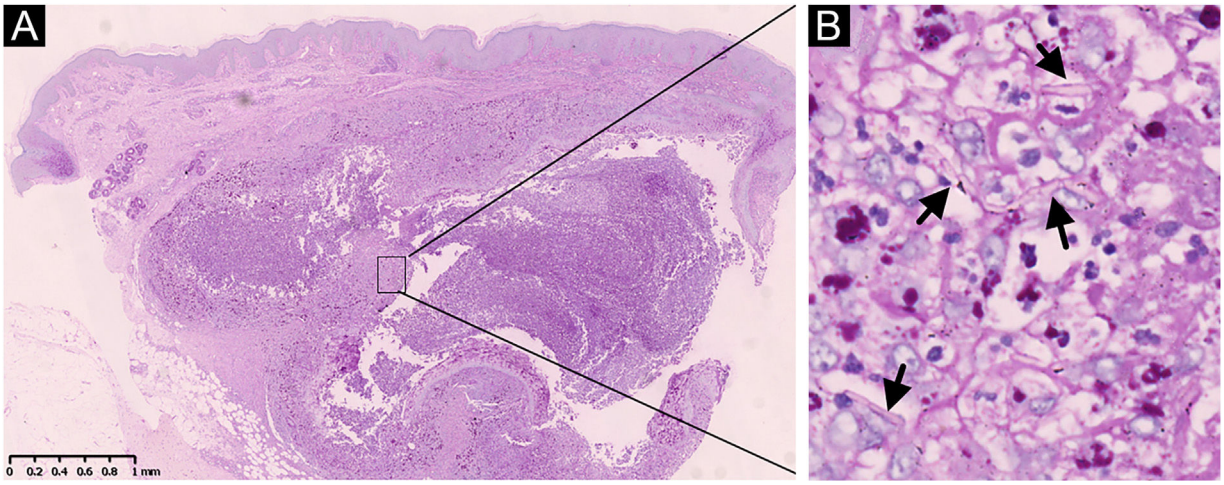

Figure 2 Light microscopy: (A) dermal abscess (periodic acid-Schiff, ×20); (B) Intracellular hyphae (arrow heads) in multinucleated cells in granuloma (periodic acid-Schiff, ×400).

and subcutaneous tissue, causing tinea profunda, also called deep dermatophytosis.[1] Tinea profunda is characterized by the extension of dermatophyte infection beyond the perifollicular area, sometimes spreading to lymph nodes.[2] Most tinea profunda patients have innate or acquired immunodeficiency, including malnutrition, diabetes, leukemia, lymphoma, Acquired Immunodeficiency Syndrome, solid organ transplantation, and chronic kidney disease.[2]

In the present case, diabetes mellitus, chronic kidney disease and systemic glucocorticoid treatment for Bullous Pemphigoid (BP) inhibited the patient's innate and acquired immune system. Although the patient's blood test was positive to fungal glucan, suggesting a deep fungal infection, the blood fungal culture was negative, and no lymphadenopathy was found by ultrasonography. The patient had onychomycosis for many years and did not received any treatment (Fig. 1C). As BP causes pruritus, the superficial dermato-

phyte may have been inoculated through the patient's scratching, leading to generalized nodular tinea profunda.

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Authors' contributions

Wei Li: Critical review of the literature; critical review of the manuscript.

Kun-E Lu: Drafting and editing of the manuscript.

Sui-Qing Cai: Design and planning of the study.

Li-Min Lao: Approval of the final version of the manuscript.

Conflicts of interest

None declared.

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Hidradenoma papilliferum of the vulva: a dermoscopic challenging diagnosis☆

Dear Editor,

A 50-year-old woman presented with an asymptomatic cutaneous papular lesion on the vulva (right interlabial fold) of unknown duration. Genital examination revealed a single, firm, well-circumscribed, smooth surfaced focally ulcerated papule (4 × 4 mm) with no pigment (Fig. 1A). There was no evidence of any bleeding, breakdown, or infection. The inguinal lymph nodes were not enlarged on either side. Dermoscopy showed a central reddish ulceration with undermined edges due to the detachment of the mucosal surface from the lower layers surrounded by a whitish halo in the absence of other dermoscopically-relevant parameters (Fig. 1B). There was a non-specific vascular pattern with tiny linear vessels on a reddish and whitish background. The clinical and dermoscopic features did not suggest any diagnosis. If the dermoscopic aspect could be used to exclude a melanocytic lesion, even an achromic one, then a diagnosis of squamous cell carcinoma – a very frequent tumor in this particular anatomical site – could not be excluded. An excisional biopsy was performed followed by a histopathological examination. Microscopically, a dermal cystic adnexal tumor composed of numerous papillary projections lined by a peripheral layer of myoepithelial cells and a luminal layer of tall columnar cells showing decapitation secretion (Fig. 2) was observed; thus, a final diagnosis of hidradenoma papilliferum (HP) was made.

The patient received no further therapy and had an uneventful clinical course during a 10-year follow-up. During this period, the patient underwent a shave biopsy of another mucosal lesion on the labia minora of the vulva, and the histopathological examination revealed a fibroepithelial polyp with associated mild viral-related changes on the overlying epithelium.

HP is a benign adnexal neoplasm that develops almost exclusively in women with a wide age range preferentially in the labium majus of the vulva. Although HP was previously thought to have an apocrine origin, recent studies have suggested that it may derive from the anogenital mammary-like glands.[1] It usually presents clinically as an asymptomatic, slow-growing, well-circumscribed, flesh-colored to red nodule typically located in the vulval interlabial sulcus or labium majus.

The term ''ectopic'' HP has been reported to describe cases occurring in the head and neck as well as the breast, axilla, external ear canal, and eyelid.

HP may have a heterogeneous clinical appearance and can mimic other vulval neoplasms; thus, the final diagnosis needs to be confirmed histologically.

Although HP has been histologically well characterized, to the best of our knowledge, the dermoscopic features of vulval HP have only been reported by Tosti et al.[2] They reported that most polymorphous dermoscopic findings do not lead to a definitive diagnosis. In fact, in the descriptions of the dermoscopic parameters, we found central brown to

☆ Study conducted at the Dermatological Clinic of the University of Florence, Florence, Italy.