Vulvar Majocchi granuloma and kerion formation in an immunocompetent female

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Abstract

We report a rare case of vulvar Majocchi granuloma and kerion formation secondary to *Trichophyton* in an immunocompetent woman. The patient responded well to oral terbinafine and a short course of oral corticosteroids with a slow taper. Resolution of deep dermatophytosis requires prompt pathogen identification and treatment to avoid scarring and hair loss. Herein, we aim to increase clinical awareness and early recognition of this atypical presentation of a Majocchi granuloma with kerion formation.

Keywords: kerion, Majocchi granuloma, vulva

Introduction

Majocchi granuloma is a nodular granulomatous perifollicular process that can be either superficial or deep and is commonly seen on the legs of women, precipitated by shaving. Deeper variants may be associated with immunosuppression and can present on alternative sites including the scalp, face, hands, forearms, and rarely the vulva [1]. *Trichophyton* species are typically identified as the pathogens and infections clear with oral anti-fungal therapy. Delay in pathogen recognition and treatment can lead to scarring and hair loss. Herein, we report a rare case of vulvar Majocchi granuloma and kerion formation secondary to *Trichophyton* in an immunocompetent woman.

Case Synopsis

An otherwise healthy 30-year-old woman presented to clinic with a painful eruption in the groin and vulva, noted after shaving with a razor. Initial treatment by the primary physician included two-weeks of systemic antifungal therapy, followed by a course of oral steroids, and oral metronidazole, which offered minimal relief.

On initial examination in our clinic, the inguinal creases had scattered annular plaques studded with small 1-2mm pustules and the suprapubic area exhibited indurated perifollicular papules (**Figure 1A)**. Notably, her hands, feet, and nails were clear of abnormality. Initial punch biopsy revealed septate hyphal forms in the stratum corneum and subcorneal pustules (**Figure 1B)**. Hyphae were confirmed by DPAS and biopsy was consistent with tinea corporis. A superficial fungal culture was positive for *Trichophyton* species. She was started on oral terbinafine with improvement of the pustules.

However, one week later, she had developed painful indurated nodules and fluctuant plaques of the vulva and mons pubis (**Figure 2A)**. A second biopsy of a nodule revealed granulomatous, suppurative dermatitis (**Figure 2B)**. Tissue cultures at this time were negative and confirmed our clinical suspicion of Majocchi granuloma complicated by kerion formation during appropriate treatment. A low dose prednisone course was initiated at 20mg (0.25mg/kg) and slowly tapered over two weeks. Terbinafine was also continued for a total course of two months. The nodules and plaques improved in size and the patient had significant improvement in pain. At her two-months follow-up appointment her infection had completely cleared and the affected areas on her vulva had healed with post inflammatory hyperpigmentation, scarring, and mild

pubic hair loss. Evaluation for an immune-compromised status, including testing for HIV and absolute CD4 count, was negative.

Case Discussion

Majocchi granuloma of the vulva is an uncommon presentation of a common disease process. With only a handful of cases reported in the literature most cases are associated with an immunocompromised state [1-6]. Reports of Majocchi granuloma on the legs is frequently associated with shaving with a razor. *Trichophyton*species continues to be the most common culprit [1]. Given the common practice of shaving in the vulvar and suprapubic area, we suspect that this disease process may be more common than has been reported in the literature. Spread from dermatophyte infection from the nails or feet has also been described. In our patient's case, she reports shaving the vulvar area prior to onset of symptoms. Although she was initially treated with an antifungal, her course was not long enough for infection clearance. She was immunocompetent and denied any recent travel or exposure to pets or infected individuals. She responded well to oral terbinafine, but her course was complicated by kerion formation requiring a low dose prednisone taper.

Our patient's skin lesions healed with mild scarring and areas of patchy hair loss in the vulvar region as is often the case in tinea infections complicated by Majocchi granuloma and kerion formation. Alopecia and scarring are common and prompt diagnosis and pathogen identification are paramount to initiating appropriate therapy and clearance of disease. Generally topical antifungal medications are insufficient and a prolonged course of oral antifungals with terbinafine as the first line agent are required. We report this case to increase clinical awareness and early recognition of this atypical vulvar presentation of a Majocchi granuloma with kerion formation.

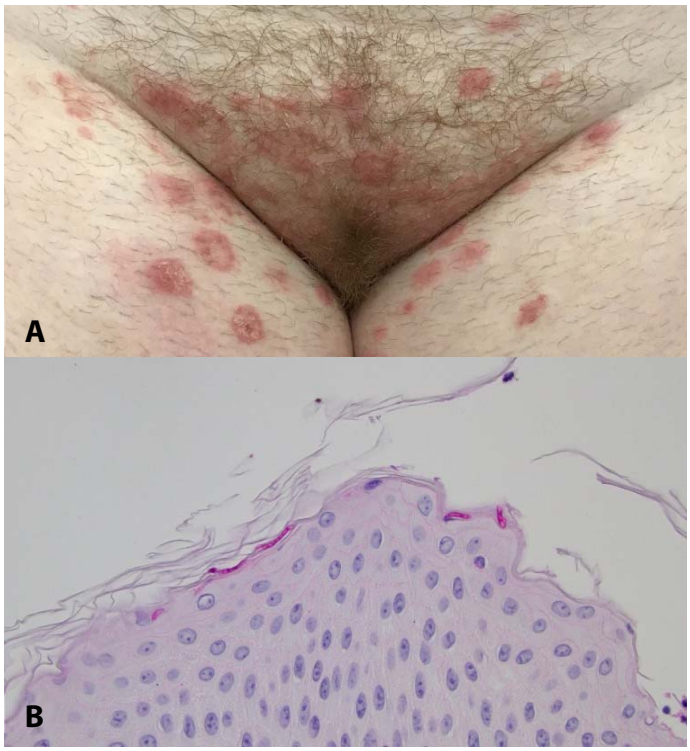

Figure 1. ***A)*** *At the initial visit, the patient's bilateral inguinal creases demonstrated scattered annular plaques studded with small 1-2mm pustules; the suprapubic area exhibited indurated perifollicular papules.* ***B)*** *Initial punch biopsy revealed septate hyphal forms in the stratum corneum and subcorneal pustules on hematoxylin and eosin staining, which was confirmed with DPAS (shown, 40×).*

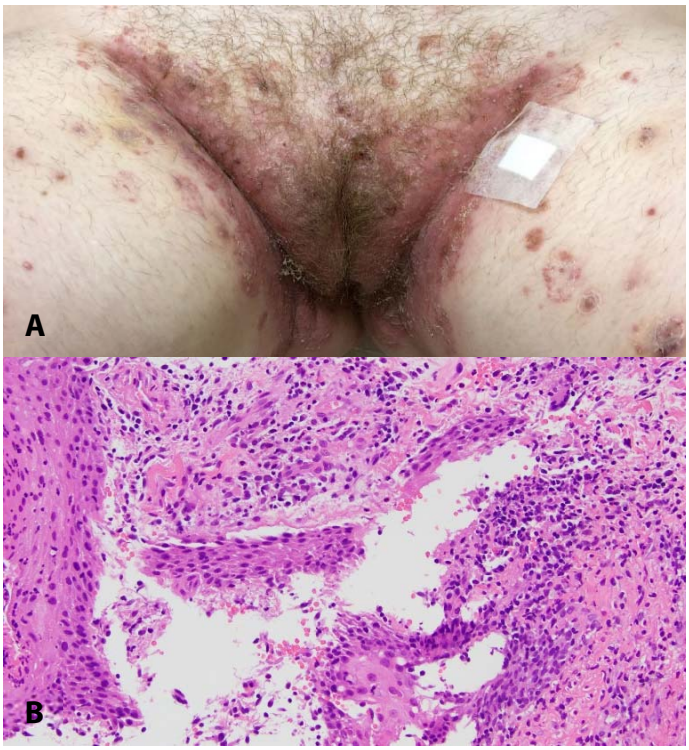

Figure 2. ***A)*** *At one-week follow-up, the patient developed additional painful indurated nodules and plaques in the vulvar and inguinal regions consistent with kerion formation.* ***B)*** *A second biopsy of a nodule revealed granulomatous, suppurative dermatitis on H&E stain consistent with Majocchi granuloma, 20×.*

Potential conflicts of interest

The authors declare no conflicts of interests.

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