Erythematous Pruritic Plaque on the Cheek

Shane P. McTighe, DO; Robert Rampton, DO; Brett Ozanich, DO

A 19-year-old man with a medical history of keloids presented with a slowly enlarging, red, itchy plaque on the left cheek of 1 year's duration that first began to develop during basic training in the military. The patient denied other pain, pruritus, or separate dermatitis. He initially was treated with triamcinolone cream 0.1%, which he used for 8 days prior to referral to the dermatology department. The patient denied other acute concerns. On physical examination, multiple erythematous papules coalescing into a large, 10-cm, papulosquamous, arciform plaque were noted on the left preauricular cheek.

WHAT'S THE **DIAGNOSIS?**

a. erythema annulare centrifugum
b. granuloma annulare
c. sarcoidosis
d. subacute cutaneous lupus erythematosus
e. tinea faciei

PLEASE TURN TO PAGE E6 FOR THE DIAGNOSIS

From William Beaumont Army Medical Center, El Paso, Texas. Drs. McTighe and Rampton are from the Transitional Internship Program, and Dr. Ozanich is from the Department of Dermatology.
The authors report no conflict of interest.

Correspondence: Shane P. McTighe, DO, William Beaumont Army Medical Center, 5005 N Piedras St, El Paso, TX 79920 (shane.p.mctighe.mil@mail.mil).

THE **DIAGNOSIS:** Tinea Faciei

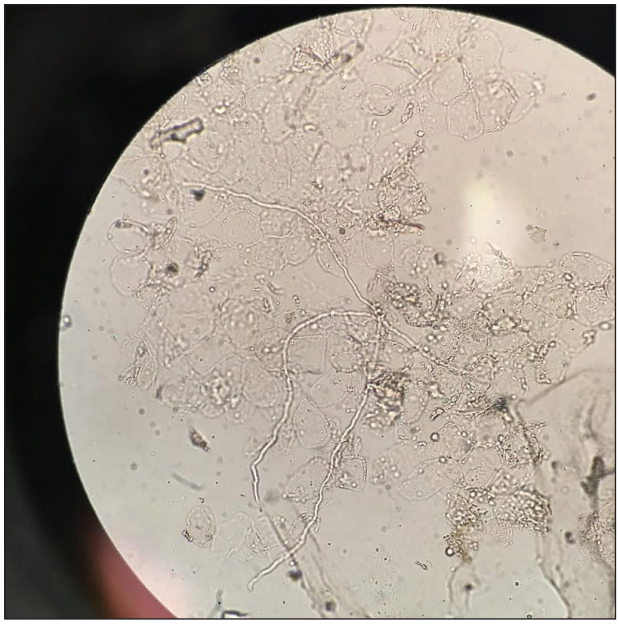
Given the morphology of the plaque, a potassium hydroxide preparation was performed and was positive for hyphal elements consistent with dermatophyte infection (Figure).

Tinea faciei is a fungal infection of the face caused by a dermatophyte that invades the stratum corneum.[1] It is transmitted through direct contact with an infected individual or fomite.[2] Infections typically are characterized by annular or serpiginous erythematous plaques with a scaly appearance and advancing edge. There may be associated vesicles, papules, or pustules with crusting around the advancing border.[3] Tinea faciei can occur concomitantly with other dermatophytic infections and frequently presents atypically due to different characteristics of facial anatomy when compared to other tinea infections. As a result, it often is misdiagnosed.[1]

Tinea faciei represents roughly 19% of all superficial fungal infections and occurs more commonly in temperate humid regions.[4] It can occur at any age but has bimodal peaks in incidence during childhood and early adulthood.[5] The most common causative dermatophytes are *Trichophyton tonsurans, Microsporum canis, Trichophyton mentagrophytes,* and *Trichophyton rubrum*.[1] Transmission is mainly through direct contact with infected individuals, animals, or soil, which likely occurred during the close quarters and exercises our patient experienced during basic training in the military.

Tinea faciei often is misdiagnosed and treated with topical corticosteroids. The steroids can give a false impression that the rash is resolving by initially decreasing the inflammatory component and reducing scale, which is referred to as tinea incognito. Once the steroid is stopped, however, the fungal infection often returns worse than the original presentation. The differential diagnosis includes subacute cutaneous lupus erythematosus, periorificial dermatitis, seborrheic dermatitis, psoriasis, rosacea, erythema annulare centrifugum, granuloma annulare, sarcoidosis, and contact dermatitis.[1,3,6]

Diagnosis of tinea faciei is best made with skin scraping of the active border of the lesion. The scraping is treated with potassium hydroxide 10%. Visualizing branching or curving hyphae confirms the diagnosis. Fungal speciation often is not performed due to the long time needed to culture. Wood lamp may fluoresce blue-green if tinea faciei is caused by *Microsporum* species; however, diagnosis in this manner is limited because other common species do not fluoresce.[7]



Hyphal elements noted on potassium hydroxide preparation were consistent with dermatophyte infection.

Options for treatment of tinea faciei include topical antifungals for 2 to 6 weeks for localized disease or oral antifungals for more extensive or unresponsive infections for 1 to 8 weeks depending on the agent that is used. If fungal folliculitis is present, oral medication should be given.[1] Our patient was treated with oral terbinafine 250 mg once daily for 4 weeks with follow-up after that time to ensure resolution.

REFERENCES

1. Lin RL, Szepietowski JC, Schwartz RA. Tinea faciei, an often deceptive facial eruption. *Int J Dermatol*. 2004;43:437-440.
2. Raimer SS, Beightler EL, Hebert AA, et al. Tinea faciei in infants caused by *Trichophyton tonsurans*. *Pediatr Dermatol*. 1986;3:452-454.
3. Shapiro L, Cohen HJ. Tinea faciei simulating other dermatoses. *JAMA*. 1971;215:2106-2107.
4. Havlickova B, Czaika VA, Friedrich M. Epidemiological trends in skin mycoses worldwide. *Mycoses*. 2008;51(suppl 4):2-15.
5. Jorquera E, Moreno JC, Camacho F. Tinea faciei: epidemiology. *Ann Dermatol Venereol.* 1991;119:101-104.
6. Hsu S, Le EH, Khoshevis MR. Differential diagnosis of annular lesions. *Am Fam Physician*. 2001;64:289-296.
7. Ponka D, Baddar F. Wood lamp examination. *Can Fam Physician*. 2012;58:976.