

Letters to the Editor

Case Report: Tinea Capitis in a 10-Year-Old Child

To the Editor: Scalp dermatitis with scaling can be challenging to diagnose in children. Tinea capitis, the most common cause of hair loss among children, should be excluded.

A 10-year-old patient presented with a seven-year history of scalp scaling, beginning with a quarter-sized, well-demarcated scaly plaque of hair loss, previously diagnosed as seborrheic dermatitis and treated with topical antifungals and corticosteroids. Two months earlier, the patient developed fluctuance, purulent drainage, and alopecia.

The patient had an erythematous, boggy patch of alopecia involving more than 50% of the scalp and clinically consistent with a kerion (*Figure 1*), an inflammatory subtype characterized by tender, erythematous, boggy plaques with thick crusting, often with pustules and purulent drainage.^{1,2}

FIGURE 1



Tender, erythematous, boggy plaque with scattered purulent drainage on the scalp.

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The patient had no cervical lymphadenopathy. A potassium hydroxide scraping test and Wood lamp examination were negative. A punch biopsy found hyphae and spores within the hair shaft. The fungal culture grew *Trichophyton tonsurans*. The patient was treated with griseofulvin, 20 to 25 mg per kg per day, and ketoconazole 2% shampoo applied to the scalp for five minutes, rinsed daily for two weeks, and then rinsed twice a week for six weeks. The kerion resolved after eight weeks, leaving patchy alopecia with permanent scarring.

Tinea capitis can mimic seborrheic dermatitis, atopic dermatitis, contact dermatitis, scalp psoriasis, sebopsoriasis, and discoid lupus. It can develop into a kerion.^{1,2} It is caused by advanced disease and an exaggerated immune response, predominantly found in children five to 10 years of age.³ More than 20 misdiagnosed cases have been reported, usually as bacterial abscesses or dissecting cellulitis.⁴ Delayed treatment increases risk of permanent hair loss.

Tinea capitis should be treated with systemic antifungals because topical medications inadequately penetrate the hair follicle.² Oral griseofulvin is the first-line treatment.⁵ A systematic review found that griseofulvin was more effective for *Microsporum* species, whereas terbinafine (Lamisil) was equally or slightly more effective for *Trichophyton* dermatophytes.^{1,5} Some clinicians treat kerion with prednisone, although combination treatment may not be superior to antifungals alone.⁶ Antibiotics are unnecessary unless a secondary bacterial infection is identified.⁶

Topical antifungal shampoos as an adjunctive scalp treatment can decrease infectivity and be used in family members to decrease risk of reinfection from asymptomatic carriers. Ketoconazole 2% shampoo should be applied to the scalp for five to 10 minutes, two to three times per week for at least two weeks or until the infection has cleared. Fomites should be disinfected or discarded because dermatophytes can stay viable for prolonged periods.¹

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References

1. John AM, Schwartz RA, Janniger CK. The kerion: an angry tinea capitis. *Int J Dermatol*. 2018;57(1):3-9.
2. Hay RJ. Tinea capitis: current status. *Mycopathologia*. 2017;182(1-2):87-93.
3. Zaraq I, Hawilo A, Aounallah A, et al. Inflammatory tinea capitis: a 12-year study and a review of the literature. *Mycoses*. 2013;56(2):110-116.
4. Shastri J, Ciliberto H, Davis DM. Tinea capitis mimicking dissecting cellulitis in three children. *Pediatr Dermatol*. 2018;35(1):e79-e83.
5. Chen X, Jiang X, Yang M, et al. Systemic antifungal therapy for tinea capitis in children: an abridged Cochrane review. *J Am Acad Dermatol*. 2017;76(2):368-374.
6. Proudfoot LE, Higgins EM, Morris-Jones R. A retrospective study of the management of pediatric kerion in *Trichophyton tonsurans* infection. *Pediatr Dermatol*. 2011;28(6):655-657. ■