



**Candrice R. Heath, MD**  
Department of Dermatology,  
Lewis Katz School of  
Medicine, Temple University,  
Philadelphia, PA



**Richard P. Usatine, MD**  
Family and Community Medicine,  
Dermatology and Cutaneous  
Surgery, University of Texas  
Health, San Antonio

## Tinea capitis



### THE COMPARISON

- A** Areas of alopecia with erythema and scale in a young Black boy with tinea capitis. He also had an enlarged posterior cervical lymph node (arrow) from this fungal infection.
- B** White patches of scale from tinea capitis in a young Black boy with no obvious hair loss; however, a potassium hydroxide preparation from the scale was positive for fungus.
- C** A subtle area of tinea capitis on the scalp of a Latina girl showed comma hairs.

**T**inea capitis is a common dermatophyte infection of the scalp in school-aged children. The infection is spread by close contact with infected people or with their personal items, including combs, brushes, pillowcases, and hats, as well as animals. It is uncommon in adults.

### Epidemiology

Tinea capitis is the most common fungal infection among school-aged children worldwide.<sup>1</sup> In a US-based study of more than 10,000 school-aged children, the prevalence of tinea capitis ranged from 0% to 19.4%, with Black children having the highest rates of infection at 12.9%.<sup>2</sup> However, people of all races and ages may develop tinea capitis.<sup>3</sup>

Tinea capitis most commonly is caused by *Trichophyton tonsurans* and *Microsporum canis*. Dermatophyte scalp infections caused by *T tonsurans* produce fungal spores that may occur within the hair shaft (endothrix) or with fungal elements external to the hair shaft (exothrix) caused by *M canis*. *M canis* usually fluoresces an apple green color on Wood lamp examination

because of the location of the spores.

### Key clinical features

Tinea capitis has a variety of clinical presentations:

- broken hairs that appear as black dots on the scalp
- diffuse scale mimicking seborrheic dermatitis
- well-demarcated annular plaques
- exudate and tenderness caused by inflammation
- scalp pruritus
- occipital scalp lymphadenopathy.

### Worth noting

Tinea capitis impacts all patient groups, not just Black patients. In the United States, Black and Hispanic children are most commonly affected.<sup>4</sup> Due to a tendency to have dry hair and hair breakage, those with more tightly coiled, textured hair may routinely apply oil and/or grease to the scalp. However, the application of heavy emollients, oils, and grease to camouflage scale contributes to false-negative fungal cultures of the scalp if applied within 1 week of the fungal culture, which may delay diagnosis. If tinea capitis is suspected, occipital

lymphadenopathy on physical examination should prompt treatment for tinea capitis, even without a fungal culture.<sup>5</sup>

### Health disparity highlight

A risk factor for tinea capitis is crowded living environments. Some families may live in crowded environments due to economic and housing disparities. This close contact increases the risk for conditions such as tinea capitis.<sup>6</sup> Treatment delays may occur due to some cultural practices of applying oils and grease to the hair and scalp, camouflaging the clinical signs of tinea capitis. **JFP**

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