

Chapter 50

An Infectious Scalp Disorder



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A seven-year-old Japanese girl was referred to the Department of Dermatology and Venerology with severe pruritus and scaly patch on the scalp since two months. The patient had a cat. She denied pulling her hair. No family members had similar skin lesions.

On physical examination, we found an ill-defined area of hair loss approximately six cm in diameter. Short and dull hairs with coexisted whitish, fine scales in the center and around the lesion were observed. A Wood's lamp examination revealed blue-green fluorescence (Fig. 50.1). Her body weight was 17 kg.



Fig. 50.1 An grayish, ill-defined patch of hair loss with the presence of short and dull hairs. Moreover, whitish, fine scaling is observed. A Wood's lamp examination of the scalp revealed bright blue-green fluorescence

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Based on the case description and the photographs, what is your diagnosis?

Differential Diagnoses

1. Gray patch tinea capitis.
2. Seborrheic dermatitis.
3. Alopecia areata.
4. Trichotillomania.

Diagnosis

Tinea capitis.

Discussion

The diagnosis of tinea capitis is mainly established based on patient's history and clinical features supported by Wood's lamp examination, direct mycological examination with potassium hydroxide and fungal culture. Fungal culture still remains as a gold standard diagnostic method [1, 2].

Treatment of choice for tinea capitis in children is micro-sized griseofulvin 20–25 mg/kg/day [1, 3]. Ketoconazole 2% shampoo two–four times weekly for two–four weeks is recommended as adjuvant therapy [1]. The differential diagnoses for the presented patient included seborrheic dermatitis, alopecia areata and tinea capitis. In seborrheic dermatitis, no broken hairs are presented [4]. Alopecia areata is characterized by the presence of well-defined areas of hair loss within the skin remains normal [5]. The patient did not have habit of hair pulling, thus trichotillomania was excluded [6].

In the presented patient, a direct mycological examination showed an ectothrix invasion on the hair shaft (Fig. 50.2). In fungal culture, *Microsporum canis* was isolated (Fig. 50.3). The patient was treated with oral micronized griseofulvin 375 mg daily and topical ketoconazole 2% shampoo three times a week for eight weeks. Complete resolution of the skin lesions was observed. A follow-up mycological examination was negative.

Key Points

- Tinea capitis is a superficial fungal infection commonly seen in children and caused by *Microsporum* and *Trichophyton*.
- Tinea capitis typically requires oral treatment.

Fig. 50.2 A direct mycological examination shows ectothrix invasion on the hair shaft

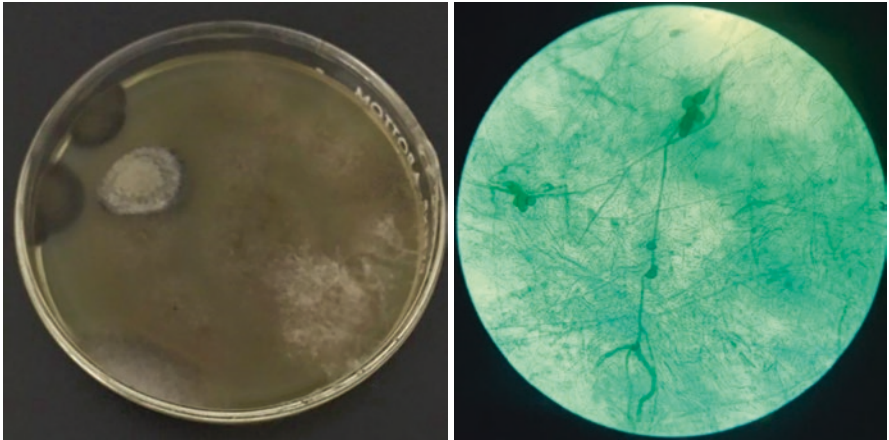
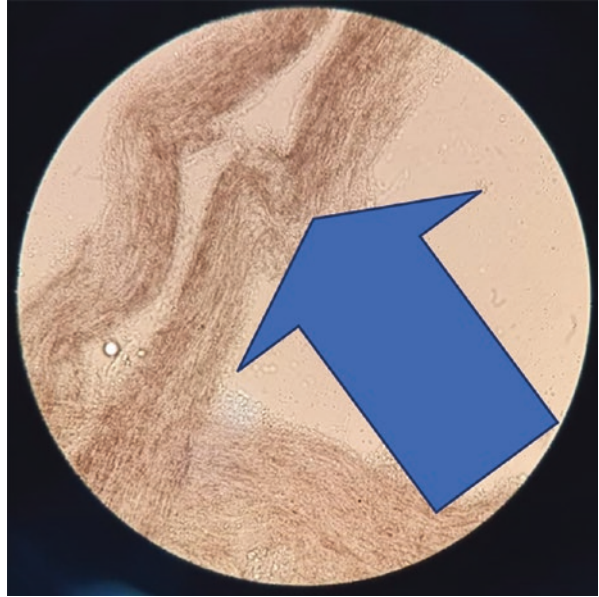


Fig. 50.3 Fungal culture with the growth of *Microsporium canis*. A microscopic examination revealed macroconidia consistent with *Microsporium canis*

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