

A Dermoscopic Finding of Tinea Capitis caused by *Microsporum canis*

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Dermoscopy is a non-invasive diagnostic tool that visualizes the hair shafts, follicular ostia, and perifollicular skin to diagnose scalp and hair disorders. Although mycological examination is the gold standard for tinea capitis diagnosis, abnormal patterns of dermoscopic findings can help narrow the differential diagnosis¹.

A one-year-old boy approached our clinic with a single scaly erythematous alopecic patch on his scalp. He had a history of contact with cats in the countryside, and the lesion occurred 15 days ago. On the background of the erythema, there were prominent corkscrew hair that were twisted and coiled observed during dermoscopy (Fig. 1A, 1B). On KOH examination, septated hyphae were found in the scalp scale, and spores were found on the outside of the hair shaft. On the Sabouraud agar plate, yellowish colonies grew quickly (Fig. 1C, 1D). The macroconidia had thick walls, more than six cells, and a curved knob-like end. These findings indicated the presence of *Microsporum canis* infection (Fig. 1E).

Comma, corkscrew, Morse code-like, zigzag, and bent hair are the most common dermoscopic findings of tinea capitis. Corkscrew hair were most noticeable in our case. Hughes et al. first described corkscrew hair in patients of African descent as a variation of comma-shaped hair². *Trichophyton* and *Microsporum* species were found in cases of tinea capitis. According to the systemic review by Wakiel-Burnat et al., corkscrew hair has a sensitivity of 32% and a specificity of 100%³. It suggested that corkscrew hair is the specific indicator for diagnosing tinea capitis.

In conclusion, dermatologists need to consider that abnor-

mal findings in dermoscopy can play an important role in the diagnosing tinea capitis. Herein, we report the corkscrew hair pattern upon dermoscopy, which was one of the specific findings.

Keywords: Corkscrew pattern, Dermoscopy, Tinea capitis

CONFLICT OF INTEREST

In relation to this article, we declare that there is no conflict of interest.

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PATIENT CONSENT STATEMENT

The patient provided written informed consent for the publication and the use of his images.

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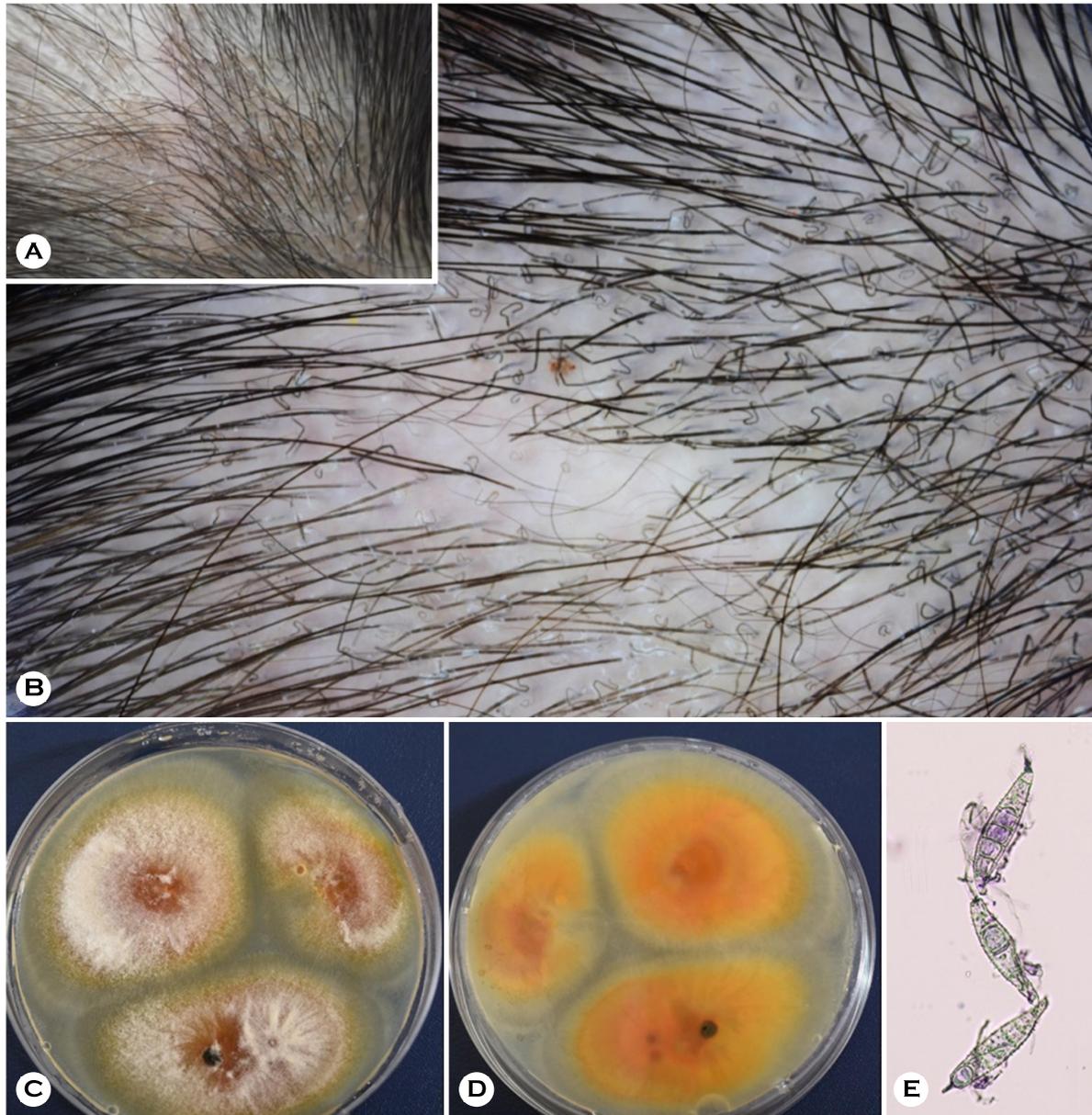


Fig. 1. (A) A single scaly erythematous patch with broken hairs was observed on the occiput. (B) Dermoscopy revealed twisted and coiled hair forming corkscrew-like structures with erythema and scales. (C, D) Fast-growing yellow colonies were seen on the Sabouraud agar plate. (E) The macroconidia had thick walls, more than six cells, and curved knob-like end (lactophenol cotton blue, $\times 200$).

REFERENCES

1. Rudnicka L, Rakowska A, Kerzeja M, Olszewska M. Hair shafts in trichoscopy: clues for diagnosis of hair and scalp diseases. *Dermatol Clin* 2013;31:695-708
2. Hughes R, Chiaverini C, Bahadoran P, Lacour JP. Corkscrew hair: a new dermoscopic sign for diagnosis of tinea capitis in black children. *Arch Dermatol* 2011;147:355-356
3. Waśkiel-Burnat A, Rakowska A, Sikora M, Ciechanowicz P, Olszewska M, Rudnicka L. Trichoscopy of tinea capitis: a systematic review. *Dermatol Ther (Heidelb)* 2020;10:43-52