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Barber-related tinea infections: a hidden public health risk in the era of electric grooming

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Dear Editor,

In recent years, dermatologists across multiple countries have observed a resurgence of superficial dermatophytoses, particularly among adolescents and young adults. This epidemiological shift has been attributed to changing grooming habits, including the widespread use of electric razors and trimmers in commercial barbershops.¹ While tinea corporis and tinea barbae are historically well-characterized, their modern modes of transmission remain underexplored and frequently underestimated in both clinical and public health settings. The growing body of literature suggests that electric grooming devices may act as mechanical vectors for dermatophyte spores, especially when disinfection protocols are inadequate or inconsistently applied.² However, direct clinical evidence linking recent grooming to confirmed dermatophyte infections remains scarce and fragmented. Over the past 3 years, we have documented 84 cases of dermatophytic infections in adolescents and young adults, all linked to recent haircuts or beard grooming performed at commercial barbershops using electric clippers and foil shavers. All patients presented with tinea lesions sharply localized to areas subjected to electric shaving – namely, the nape of the neck, the lateral temples, and the beard region. No cases involved anatomical areas that had not been exposed to such grooming tools, and every patient reported barber exposure within 10 days prior to symptom onset. The clinical presentation in all cases included erythematous, scaly plaques with follicular involvement, perifollicular inflammation, and frequent misdiagnoses of bacterial folliculitis or pseudofolliculitis. Potassium hydroxide microscopy and mycological cultures were systematically performed in every case. The causative pathogens included *Trichophyton tonsurans* in 49 cases, *Trichophyton mentagrophytes* in 19 cases, *Microsporum canis* in 11 cases, and *Nannizzia gypsea* in 5 cases. Dermoscopy supported the diagnosis in all patients by revealing characteristic signs such as comma hairs, broken hairs, and perifollicular scaling. The average time from exposure to onset of clinical symptoms was 5 days, with a range from 3 to 8 days. In 60 patients (71% of 84), the initial treatment consisted of topical or systemic antibiotics and corticosteroids due to misdiagnosis, which led to tinea incognito in approximately 29 patients (35% of the total cohort). None of the patients had recent travel history or known exposure to infected animals, which further strengthens the hypothesis of iatrogenic transmission during aesthetic procedures (Figure 1 and Table 1).³ The internal components of electric grooming tools, including plastic heads, motorized blades, and heat exposure, hinder effective sterilization. Alcohol-based sprays and UV exposure, commonly used in barbershops, are inadequate against fungal spores, as demonstrated in previous microbiological studies.⁴ This aligns with similar findings reported in Italy and France, where outbreaks of *Trichophyton tonsurans* infection were traced back to grooming practices.⁵ The clinical and

epidemiological pattern strongly supports the hypothesis that mechanical trauma from electric shaving, combined with insufficient disinfection protocols, facilitates the transmission of dermatophyte infections. Moreover, the centrifugal airflow produced by high-speed clippers may contribute to the environmental dissemination of spores, a factor not adequately addressed in current hygiene guidelines. A recent investigation in Italy by Addari *et al.*³ confirmed this transmission route and highlighted the need for microbiological vigilance in the barbershop setting. Despite growing epidemiological alerts, there is still resistance among grooming professionals to acknowledge the infectious risk associated with electric razors. Public health policies and hygiene regulations have not yet adapted to the evolving technology of grooming tools. Our data underscore the urgency of a coordinated response involving dermatologists, public health officials, and professional barbershop associations to revise disinfection protocols and promote awareness. The widespread adoption of sterilizable or single-use shaving devices should be actively encouraged. Dermatologists should be alerted to this scenario when evaluating follicular eruptions in shaved areas and consider early mycological testing to avoid inappropriate treatment.

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Figure 1. Clinical presentation of tinea infections localized to areas shaved with an electric razor, including the scalp, beard, and nuchal region. a) Inflammatory tinea capitis with pustules, scaling, and crusting on the occipital scalp. b) Annular, scaly lesion on the lateral neck, suggestive of tinea corporis following razor use. c) Subtle erythematous plaques with annular morphology at the nape, at the junction with scalp hair. d) Tinea barbae with erythematous, scaly plaques in the beard area of the mandibular region. e) Concentric annular lesions on the posterior neck with active borders, typical of tinea corporis. f) Well-demarcated erythematous patch behind the ear on the retroauricular neck, consistent with localized tinea. These lesions highlight the role of shared or improperly disinfected shaving equipment in the transmission of dermatophytosis, especially among adolescents and young adults.



Table 1. Clinical and epidemiological characteristics of 84 patients with barber-associated tinea.

Parameter	Description
Number of patients	84
Gender (female/male)	0 females/84 males
Average age (years)	18.7
Age range (years)	13-24
Clinical presentation	Tinea barbae (n=61), tinea capitis (n=23)
Lesion location	Beard area, posterior neck, scalp
Suspected source	Barber's electric trimmers (unsterilized or reused)
Time from haircut to onset (days)	Median: 6 days (range: 2-12)
Symptoms	77/84 patients
Dermoscopic features	Broken hairs, comma hairs, corkscrew hairs, perifollicular scaling
Microscopy (KOH positive)	79/84 patients
Culture results	<i>Trichophyton tonsurans</i> (n=49), <i>Trichophyton mentagrophytes</i> (n=19), <i>Microsporum canis</i> (n=11), <i>Nannizzia gypsea</i> (n=5)
Treatment prescribed	Terbinafine 250 mg/day (n=71), griseofulvin (n=13)
Clinical resolution at 4 weeks	76/84 patients
Recurrence within 2 months	3/84 patients
Side effects	Mild gastrointestinal upset (n=4), no serious adverse events

KOH, potassium hydroxide.