

TINEA CAPITIS ON ALOPECIA AREATA

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A 4-year-old girl who developed tinea capitis on a patch of alopecia areata showed hair regrowth.

Key words : Tinea capitis, Alopecia areata, Hair regrowth.

Alopecia areata is a disease of unknown origin and not an uncommon entity. Immunologic mechanisms are thought to play a role in the genesis of alopecia areata. Though spontaneous recovery occurs in a majority of cases,¹ topical irritants^{2,3} and allergic dermatitic reactions⁴⁻⁶ are known to incite hair regrowth. Allergic dermatitic reactions by agents such as dinitrochlorobenzene are said to restore the pool of active T lymphocytes. Photochemotherapy has also been reported to be beneficial. It modifies the in situ as well as circulating lymphocyte population. Though a decrease in a subset of thymus-dependent lymphocytes during oral photochemotherapy has been demonstrated,⁷ the possible role of a primary irritant effect of PUVA cannot be excluded.

In this communication, we are describing an interesting observation where tinea capitis infection induced the hair growth in a patch of alopecia areata.

Case Report

A 4-year-old girl had multiple areas of baldness on her scalp for about 8 months. There was no history of any preceding eruption, itching on these areas or any psychological stress. Four months back, she developed itching close to a patch of alopecia. It was followed by reddish eruptions, discharge, scaling

and hair loss. History of atopy was lacking. We found multiple circumscribed patches of non-cicatricial alopecia with complete loss of hair. There were no stumps. In the occipital area, a lesion of alopecia was seen to be partly over-ridden by a circular, inflammatory, hyperpigmented and scaly patch with hair stumps. The invading border of inflammatory lesion in the patch of alopecia was hairy. Few hairs were epilated from this border for KOH preparation and culture of fungus on Sabouraud's dextrose agar medium. Microscopic examination showed several parallel rows of spores inside the hair, and the culture yielded *Trichophyton violaceum*. A diagnosis of tinea capitis on alopecia areata was made.

Comments

In our case, a patch of alopecia areata was partly invaded by the tinea capitis lesion. The invaded portion of alopecia was inflammatory with hair stumps similar to the invading lesion. Because the border of tinea capitis in alopecia areata was hairy, it is presumed that the dermatitic reaction by tinea capitis caused hair regrowth followed by hair loss in the invaded portion of alopecia areata.

The pathological process in dermatophytic infection may be very similar to dermatitis.⁸ So, the mechanism of hair regrowth in our case may be just a dermatitic reaction. However, the immunological processes cannot be ruled out.

References

1. Dawber RPR : Hair growth and its abnormalities, in : Dermatology, Vol 6, Editors, Marks R

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- and Samman PD : William Heinemann Medical Books Ltd, London, 1977; p 19-33.
2. Schmoeckel C, Weismann I, Plewig G et al : Treatment of alopecia areata by anthralin induced dermatitis, *Arch Dermatol*, 1979; 115 : 1254-1255.
 3. Fieller-Weiss C and Buys CM : Evaluation of anthralin in the treatment of alopecia arcata, *Arch Dermatol*, 1987; 123 : 1491-1493.
 4. Breuillard F and Szapiro E : Dinitrochlorobenzene in alopecia areata, *Lancet*, 1978; 2 : 1304.
 5. Daman LA, Rosenberg FW and Drake L : Treatment of alopecia areata with dinitrochlorobenzene, *Arch Dermatol*, 1978; 114 : 1036-1038.
 6. Happle R, Cebulla K and Echtenacht-Happle K : Dinitrochlorobenzene therapy for alopecia arcata, *Arch Dermatol*, 1978; 114 : 1629-1631.
 7. Haftek M, Glinski W, Jablowska S et al : T lymphocyte E rosette function during photochemotherapy (PUVA) of psoriasis, *J Invest Dermatol*, 1979; 72 : 214-218.
 8. Roberts SOB and Mackenzie DWR : Mycology, in : *Textbook of Dermatology*, Vol 2, Fourth ed, Editors, Rook A, Wilkinson DS, Ebling FJG et al : Blackwell Scientific Publications, Great Britain, 1987; p 897.