

Alopecia Syphilitica in a Prepubertal Girl

Sir,

Acute hair loss is a common manifestation of secondary syphilis, but it tends to be overlooked by patients and physicians. It may be confused with alopecia areata, trichotillomania or other alopecias, especially in children. It is important to consider the possibility of alopecia syphilitica in patients with acute patchy or diffuse hair loss. Clinicians who see teenagers

should routinely take a sexual history and be prepared to offer counseling and care (1).

CASE REPORT

An 11-year-old girl with no contributory medical history presented with a rapid increase in scalp hair loss for 3 months. The lesion failed

to respond to topical antibacterial or antifungal agents or topical corticosteroids. Physical examination revealed diffuse patchy alopecia of the entire scalp, without evidence of scarring (Fig. 1). Vertical sections of a scalp biopsy specimen demonstrated several terminal anagen hairs, one of which had a peribulbar lymphocytic infiltrate. Only a few plasma cells were present in the infiltrate. Thyroid function test results, a complete blood cell count, dehydroepiandrosterone sulfate level, and free serum testosterone level were all normal, but the rapid plasma reagin (RPR) test was reactive. Confirmatory tests for syphilis demonstrated a Venereal Disease Research Laboratory (VDRL) titer of 1:5120 and a reactive fluorescent treponemal antibody absorbed (FTA-ABS) test result. Additional details of the patient's history were obtained, and the patient admitted to a single, unprotected sexual encounter approximately 6 months before the onset of alopecia. The patient was successfully treated with oral penicillin 1,000 mg daily (30 mg/kg) for 4 weeks. Within 4 months there was dramatic hair regrowth, and 6 months after treatment the patient's VDRL titer was 1:2.

DISCUSSION

Very little is written about alopecia syphilitica in children, but it progresses in much the same manner as in an adult case. It can be transmitted from adults to children in sexual or nonsexual ways. Transmission by intimate contact is required, usually through infected oral or genital lesions.

Hair loss does not occur in primary syphilis, except in association with a primary chancre of the scalp. Hair involvement in secondary syphilis may assume several forms. The first is an uncommon symptomatic type associated with an actual secondary papulosquamous lesion on the scalp. The second type is essential syphilitic alopecia, which designates hair loss without visible syphilitic scalp lesions, including a moth-eaten alopecia, a generalized thinning of the hair, and a moth-eaten type combined with general thinning of the scalp hair (2). Moth-eaten alopecia is usually a manifestation of late secondary syphilis, but it may occur at earlier stages.

When an associated luetic skin rash or lymphadenopathy is present, the diagnosis may readily be suggested and confirmed by a positive serologic test. When such findings are absent or overlooked, a biopsy may be obtained to differentiate from other alopecias such as trichotillomania, traction alopecia, or alopecia areata. Recently, Jordaan & Louw (3) reported the histopathological features in 12 patients with moth-eaten alopecia. The main findings were a normal epidermis; follicular plugging; a mild perifollicular and perivascular cellular infiltrate composed of lymphocytes, macrophages, plasma cells, eosinophils, mast cells, and melanophages; telogenization; and follicle-oriented melanin clumping. The Warthin-Starry stain failed to confirm the presence of *Treponema pallidum* in all cases.

Since moth-eaten alopecia and early lesions of alopecia areata have considerable microscopic resemblance, serologic testing for syphilis is recommended in patients with unexplained rapid hair loss or sudden worsening of a pre-existing patterned alopecia. Non-treponemal tests, including the microscopic VDRL test and the microscopic RPR test, detect IgM and IgG antibody to certain antigens. Rising titers indicate



Fig. 1. Diffuse patchy alopecia on the scalp.

new infection, reinfection, reactivation of old infection, or treatment failure. Titers will fall with appropriate therapy. Treponemal tests such as the FTA-ABS test and the microhemagglutination assay for antibody to *Treponema pallidum* (TPHA) are used to confirm positive non-treponemal tests. Since 95% of syphilis in children is acquired as a result of sexual abuse, some experts recommend routine testing of all sexually abused children (4, 5).

Treatment for primary and secondary syphilis, including alopecia syphilitica, is benzathine penicillin G 50,000 U/kg intramuscularly up to a maximum dose of 2.4 million units (maximal adult dose) in one dose. Children with acquired syphilis beyond the new-born period should be examined at 3 months and again at 6 months for falling titers (1).

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Shoji Taniguchi and Masamitsu Ishii
Department of Dermatology, Osaka City University Medical School,
1-5-7, Asahimachi, Abeno-ku, Osaka 545, Japan.