

Moth-eaten alopecia as a sole manifestation of secondary syphilis in an adolescent: Role of a dermatologist

Sir,

Alopecia is a rare presentation of secondary syphilis affecting 2.9%–7% of the patients.^[1] Moth-eaten alopecia is pathognomonic of secondary syphilis,^[1] but as a sole manifestation in the absence of other mucocutaneous findings, it becomes a challenging task to diagnose, more so in an otherwise healthy adolescent. Once diagnosed, it also requires understanding the concern of these adolescents and proper guidance.

A 13-year-old boy visited us with complaints of patchy hair loss on the scalp for the past 45 days, which was gradual in onset and slowly progressive. He was managed on the line of alopecia areata and tinea capitis by a few dermatologists before but with only partial response. On further probing, he disclosed a history of multiple unprotected homosexual encounters with a few boys of his age group. There was no history of primary chancre on the external genitalia, blood transfusion, or abuse of injectable drugs.

A written informed consent was taken from the patient and his father for clinical examination and pictures. On physical examination, a few discrete patches of nonscarring alopecia were present on the temporal and parieto-occipital areas of the scalp, sizes ranging from 0.5 cm × 1 cm to 1 cm × 2 cm [Figures 1-3]. There was no scaling and crusting, and hair pull test was negative. Hairs on the rest of the body were normal. No healed scar of primary chancre and other mucocutaneous findings could be found. Lymphadenopathy was absent. Systemic examination did not reveal any abnormality. The ophthalmological, radiological, cardiological, and neurological examinations were normal. Keeping in mind differentials such as alopecia areata, trichotillomania, tinea capitis, telogen effluvium, and moth-eaten syphilitic



Figure 1: A single patch of alopecia at the left temporal area of the scalp of size approximately 1 cm × 1 cm



Figure 2: Multiple patches of alopecia at the right temporal area of the scalp of sizes approximately 0.5 cm × 1 cm

alopecia, routine investigations were performed. Potassium hydroxide examination from scalp hair for demonstration of fungal elements was negative. Consent for skin biopsy was denied by the patient. The venereal disease research laboratory (VDRL) test was found to be positive with 1:16 titer and was further confirmed by positive *Treponema pallidum* hemagglutination test. Enzyme-linked immunosorbent assay test for HIV was nonreactive, as were tests for Australia antigen and hepatitis C antibodies. The absence of stigmata of prenatal syphilis, no significant obstetric history of the mother, and nonreactive VDRL test of both parents ruled out the possibility of prenatal syphilis.

A diagnosis of secondary syphilis was made, the patient and his father were counseled regarding the nature of the disease, and the child was also referred to the adolescent health clinic at our center. He received a single dose of injection benzathine penicillin 2.4 million units after performing sensitivity testing, but response to treatment could not be documented as the patient was lost to follow-up.

There are two types of syphilitic alopecia, symptomatic and essential.^[1] In symptomatic type, hair loss occurs simultaneously with the presence of lesions of secondary syphilis (most commonly papulosquamous) on the scalp.^[1] The essential syphilitic alopecia shows hair loss without syphilitic lesions on the scalp. It further has three subtypes: the classic patchy moth-eaten alopecia (most frequent and pathognomonic of secondary syphilis), generalized thinning of scalp hair, and combination of both.^[1,2] To the best of our knowledge, moth-eaten alopecia as a sole manifestation of secondary syphilis in adolescents has not been reported before. We could find only



Figure 3: Multiple patches of characteristic moth-eaten alopecia at the parieto-occipital area of the scalp of sizes varying from 0.5 cm × 1 cm to 1 cm × 2 cm

five such cases and that too in the adult population.^[2-4] This presentation in a 13-year-old boy also corresponds to a decrease in age of sexual debut among Indian adolescents.^[5]

Adolescents deal with changes in their bodies, mentally as well as physically, that create curiosity.^[6] Lack of proper guidance at this stage makes them prone to high-risk sexual behavior and sexual promiscuity. To counter this, there have been various programs for delivering sexuality education to adolescents under the Government of India,^[6,7] but poor implementation has led to their failure.^[7,8] Secondary syphilis presenting as moth-eaten alopecia, the only clinical sign with the absence of other findings in a 13-year-old adolescent male showing men having sex with men behavior in a country like India, though with changing trends, was still unusual and rare. In addition to the diagnostic challenge it poses, dermatologists' role does not end at case identification and treatment. Recognition of high-risk sexual behavior and timely referral of such patients to child psychologists and adolescent-friendly health clinic running in government settings becomes necessary, so that proper counseling can be provided to them and their parents regarding changing trends of adolescent sexual behavior and safe sexual practices.

Our case draws attention toward the largely ignored topic of adolescent sexual health in the Indian setting. Dermatologists' role in treating these adolescents, counseling them regarding their sexual health, and timely referral to concerned authorities is crucial.

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Conflicts of interest

There are no conflicts of interest.

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