



Alopecia Areata after COVID-19 vaccination

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Background:

COVID vaccines are generally safe but are linked to side effects affecting different organ systems in certain individuals, including the integumentary system. We report a case of alopecia areata after COVID vaccination.

Case:

A healthy 51-year-old African American man with no past medical history presented to the internal medicine clinic with progressive hair loss that began a few days after he received the Pfizer-BioNTech COVID-19 Vaccine (BNT162b2). The hair loss involved discrete patches on his scalp and beard associated with pruritus and burning. He noticed that his hair detached easily with minimal hair pull. He denied rash, nail changes, or dental problems.

The patient endorsed no prior personal or family history of hair loss, thyroid disease, or rheumatological disorders. He denied taking any prescription medications, anabolic steroids, or over-the-counter supplements. He was sexually active with one partner in the preceding six months and denied any history of sexually transmitted infections.

Vital signs were normal. Physical examination revealed multiple circular patches of hair loss distributed diffusely on the scalp, without accompanying skin changes such as scarring, hyperkeratosis, or discoloration (Figure 1), along with similar patches on his beard.



Figure 1



Figure 2

Laboratory investigations revealed normal complete blood count, iron studies, and thyroid stimulating hormone. Treponemal antibody was negative. The patient was referred to dermatology and underwent punch biopsy, which revealed pathology consistent with alopecia areata. He was treated with intralesional triamcinolone injection, which resulted in gradual recovery and regrowth of his hair over subsequent months (Figure 2).

Discussion:

The pathophysiology of alopecia areata involves autoimmunity against hair follicles, resulting in nonscarring patches of complete hair loss (1). Vaccines activate the immune system and therefore can induce adverse reactions in genetically predisposed patients (2). Onset or worsening of alopecia areata following COVID vaccination has been described by some reports in the literature (3). The similarity of our case to these reported cases, the absence of secondary causes, and the temporal relationship between the vaccine and development of alopecia are highly suggestive. The condition is very responsive to intralesional and/or systemic glucocorticoids in most cases (4).

Conclusion:

Alopecia areata may be a rare adverse reaction resulting from COVID vaccination.

References:

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