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Recurrence of alopecia areata after covid-19 vaccination: A report of three cases in Italy

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Abstract

Background: Common COVID-19 vaccines side effects are pain at the injection site, muscle pain, fever, headaches, fatigue. Possible immune-related side effects in predisposed individuals have not been established so far.

Materials and methods: We report three cases of recurrence of alopecia areata (AA) occurred after the first dose of COVID-19 vaccine.

Results: All patients had previous episodes of AA with total hair regrowth and stable remission during the months preceding the vaccination. Rapid hair loss occurred 2-3 weeks after BNT162b2 mRNA (patient 1) and AZD1222/ChAdOx1 vaccine (patient 2 and 3), with widespread hair loss in two cases and a single patch of the vertex in one case, with typical trichoscopic features of AA.

Discussion: Both BNT162b2 mRNA and AZD1222/ChAdOx1 vaccines share the same goal of inducing the immune system, with antibodies production and Th1 cells activation with release of pro-inflammatory cytokines. Thus, in patients with pre-existing inflammatory dysregulated pathways, the interaction between the immune system and vaccines may enhance other autoimmune mechanisms. In our cases, we speculate that vaccine may have induced the hair loss focusing on components having a key role in both COVID-19 vaccination and AA pathogenesis.

Conclusion: This report may help to collect new data concerning possible immune-related effects of vaccines. Certainly, only three cases are not sufficient to draw conclusion, thus a large-scale study is necessary. Immune-mediated side effects remain a rare event, thus the benefits of COVID-19 vaccines outweigh the risk of disease flares and we strongly recommend it in all eligible patients with AA.

Keywords: COVID-19; SARS-CoV-2; alopecia areata; vaccine.

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