Alopecia Areata after COVID-19: causal or casual relationship?
Alopecia Areata pós-Covid-19: relação causal ou casual?

DOI: http://www.dx.doi.org/10.5935/scd1984-8773.2021130014

ABSTRACT
A Covid-19, doença causadora de síndrome gripal e insuficiência respiratória aguda, vem demonstrando provocar danos a diversos outros órgãos e sistemas. Várias manifestações dermatológicas já foram descritas. Relatamos um quadro de alopecia areata (AA) desencadeada possivelmente pela Covid-19 em paciente que, apesar de ter seu RT-PCR para SARS-CoV-2 negativo, apresentou IgM reagente e sintomatologia clássica relacionada à doença. Acreditamos que a Covid-19 possa ter desencadeado resposta imunológica autoimune, com a consequente produção de interferons, que levou ao quadro de AA.

Palavras-chave: Alopecia em áreas; Autoimunidade; Coronavirus

RESUMO
COVID-19, uma doença que causa sintomas gripais e falha respiratória, tem sido demonstrada como capaz de causar dano a outros órgãos e sistemas. Várias manifestações dermatológicas já foram relatadas. Relatamos um caso de alopecia areata (AA) provavelmente desencadeada pela Covid-19 em um paciente que, apesar de negativo em RT-PCR para SARS-CoV-2, apresentou IgM reagente e sintomatologia clássica relacionada à doença. Acreditamos que a Covid-19 possa ter desencadeado uma resposta autoimune, com consequente produção de interferons, que levou ao quadro de AA.

Palavras-chave: Alopecia areata; Autoimunidade; Coronavirus

INTRODUCTION

Since its appearance, COVID-19, a disease that causes acute respiratory failure (SARS-CoV-2), has been shown to damage several organs such as the nervous, cardiovascular, renal, and gastrointestinal systems. It also favors the onset of secondary infections. The literature already described several manifestations affecting the skin, such as skin rash, acro-ischemia, erythematous maculopapular rashes, livedo, cyanosis, purpura, petechiae, blisters, gangrene, urticaria, varicella-like exanthem, pernio-like lesions (COVID toes), and red half-moon nail sign. We describe a picture of alopecia areata, probably triggered by COVID-19.

CASE REPORT

A 31-year-old patient, physician, presented sudden onset of anosmia with a three-day evolution. The patient showed a drop in blood-oxygen saturation to 95% at rest and dyspnea on exertion in the following days. The nasopharyngeal swab was collected to perform RT-PCR for SARS-CoV-2 on Day 6 of symptoms, with undetected viral load. However, over the next three days, he developed myalgia, a fever of 38°C, night chills, and mild dyspnea. In the following week, the patient presented only anosmia, which lasted approximately 15 days. On the 16th day of symptoms, he collected serology for COVID, which was positive for IgM (2.5) and IgG (1.4).

Twenty-nine days after the onset of symptoms, the patient noticed a sudden loss of beard hair, forming circular areas of alopecia. These areas increased in size and converged into two large bilateral hairless regions on the chin. The patient used topical betamethasone with no improvement. The alopecia region is stable for a month but with no hair regrowth.

Alopecia areata (AA) is a chronic condition of hair follicles and nails. Its etiology is unknown, probably multifactorial. However, it has an evident association with other autoimmune diseases and may also be linked to genetic factors, cellular immunity, or even psychological trauma. The condition determines hair loss in a rounded or oval pattern with no evident inflammatory process in the skin due to follicular damage in the anagen phase, without destructing or atrophying the follicles, which is why it can be reversible.

Studies show that patients with AA have a mean increase in interferon-gamma (IFN-γ) serum levels. The AA physiopathogenesis involves the body’s self-reactivity. The possibility of a significant rise in interferons (INF) production after inflammatory processes, stimulating the action of cells of the immune system, explains its relationship with viral infections.

The increase in IFN-γ levels is associated with the severity of COVID-19. We can infer that a rise in IFN-γ rates occurred due to the disease inflammatory process, which may be related to the AA’s triggering factor (Figure 1 and 2).

Since the AA appeared after the COVID-19 symptomat period, this relationship may be causal or just casual. Nevertheless, as this is a new disease, from which we obtain further information and scientific knowledge each day, we believe that the autoimmune immune response triggered by the disease led to the onset of AA.

Figure 1: Alopecic area in right side beard

Figure 2: Alopecic area in left side beard
REFERENCES


AUTHORS’ CONTRIBUTION:

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Approval of the final version of the manuscript; study design and planning; preparation and writing of the manuscript; active participation in research orientation; critical literature review; critical revision of the manuscript.

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