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Alopecia by COVID-19: About a Case

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Abstract

Some research that has been carried out in patients who have already undergone COVID-19, indicate that between 20%-30% of these will suffer intense hair loss, multiplied by 4 or 5 after 2 to 4 months later of the illness. This exaggerated hair loss is known as telogenic effluvium. In telogenic effluvium, it is produced by an alteration in the hair growth cycle that generates an alarming loss for a limited period of time. As in any infection or period of stress, the root of the hair weakens and months after having overcome it, the hair falls in an abnormal and exaggerated way. The objective of presenting this case is to describe one of the most important and rare dermatological manifestations, which has been derived from SARS-CoV-2 infection. We present the case of a 41-year-old female patient, who was admitted to the emergency department after presenting a clinical picture of 8 days of evolution consisting of dry cough, tachycardia and diaphoresis, for which the antigen test for SARS-CoV-2, revealing a positive result, so it was decided to enter for medical management.

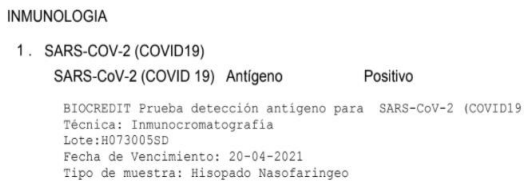
Keywords: SARS-CoV-2, COVID-19, Alopecia, Tocilizumab.

Introduction

There is growing interest in the study of cutaneous manifestations in patients with COVID-19. Currently it is not known whether the virus is directly responsible for the appearance of these cutaneous manifestations, among which a type of alopecia known as telogenic effluvium stands out. The relationship between alopecia and COVID-19 is currently being investigated around the world, with scientific studies attempting to delve into this link between the SARS-CoV-2 coronavirus disease and hair loss in infected patients. Currently, there are several ongoing investigations where it has been observed that more than a hundred patients admitted for COVID-19 had a high percentage of alopecia compared to the rest of the population. The explanation that could be behind this relationship is that the SARS-CoV-2 virus to penetrate lung cells depends on its adherence to the host surface-associated serine 2 transmembrane protease protein. And precisely the expression of this protein is related to an increase in the expression of the androgen receptor [1-4].

Case Report

This is a 41-year-old female patient who was admitted to the emergency department after presenting a clinical picture of 8 days of evolution consisting of dry cough, tachycardia and diaphoresis, for which the antigen test for SARS-CoV-2 was performed **(Figure 1)** revealing a positive result, so it was decided to enter for medical management. The patient, who was admitted to hospital from the emergency room with a diagnosis of SARS-CoV-2 pneumonia by positive PCR, underwent a chest X-ray **(Figure 2)**, which revealed interstitial infiltrates with predominantly right baseline consolidations.


INMUNOLOGIA

1. SARS-COV-2 (COVID19)

SARS-CoV-2 (COVID 19) Antígeno Positivo

BIOCREDIT Prueba detección antigeno para SARS-CoV-2 (COVID19
Técnica: Inmunocromatografía
Lote:H073005SD
Fecha de Vencimiento: 20-04-2021
Tipo de muestra: Hisopado Nasofaríngeo

Figure1: SARS-CoV-2 antigen test positive.

Figure 2: Interstitial infiltrates with predominantly right basal consolidations.

It was decided to give an evaluation by internal medicine, who decided to hospitalize and indicated management with tocilizumab 600mg and oxygen by nasal cannula at 3 liters per minute. After this, protocol management was indicated for COVID-19 with Ampicillin sulbactam, Clarithromycin, Exoxaparin and IV Corticosteroid. On the third day of hospitalization, the patient began to show abundant hair loss **(Figure 3)** and on the seventh day of hospitalization, it was decided to discharge her due to improvement of the initial clinical picture with outpatient management with Salbutamol 100mcg, Acetylsalicylic acid 100mg, Clarithromycin 500mg and Beclomethasone 50mcg, even with the current alopecia picture.

Figure 3: Telogenic effluvium secondary to SARS-CoV-2 infection.

Discussion

Patients who have contracted the COVID-19 disease, due to the direct action of SARS-CoV-2, would present a sudden and abundant loss of hair, a loss that is estimated to appear up to 3 months after having overcome the disease. The toughen effluvium would lead the patient to lose much more than the 50 to 100 hairs that usually fall out per day. It is a transitory process that takes approximately between 4 and 6 months to recover and from which until now there is no possibility of avoiding said fall. According to some study reports, people who have suffered a more severe form of COVID-19 tend to have telogen effluvium more frequently. This event is something that happens regularly with serious infections or other exceptional situations, such as multiple births, because the body prioritizes recovering from the disease, which makes both nails and hair more fragile. In addition to the infection, the stressor that has been linked to this disease should also be emphasized, remember that stress causes an increase in adrenaline, which increases its levels in the blood, causing an increase in cortisol, which consequently it will cause a decrease in blood circulation and consequently an incorrect absorption of nutrients and water by the scalp and hair follicles. This will cause the hair to weaken and all those hairs that are in the process of growth (anagen phase) to suddenly fall (telogen phase). In conclusion, the report of this case should be considered as an alert to world public health, so that this clinical presentation is considered as a possible dermatological manifestation derived from COVID-19 [5-8].

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