

CASE REPORT: GUILLAIN-BARRÉ SYNDROME AFTER COVID-19

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Abstract: Introduction: The Covid-19 pandemic began in December 2019. It is a respiratory infection that has the etiology of a coronavirus and is potentially serious. Guillain-Barré Syndrome (GBS) is an autoimmune disease whose etiology is still not fully understood, but it has infectious conditions as a trigger in more than 50% of patients. **Purpose and case report:** This study aims to report the case of a forty-year-old female patient who was diagnosed with GBS two weeks after the onset of Covid-19. The case report was carried out based on a review of medical records and correlation with the literature. **Conclusion:** There are already described cases of Guillain-Barré Syndrome after COVID-19, which argues in favor that the SARS-COV-2 virus can be a triggering factor of this syndrome, but the medical literature still lacks studies that prove this relationship.

Keywords: Guillain-Barré syndrome; COVID-19; SARS-COV-2.

INTRODUCTION

The Covid-19 pandemic began in December 2019. It is a respiratory infection that has a coronavirus as an etiology and is potentially serious. GBS is an autoimmune disease whose etiology is still not fully understood, but it has infectious conditions as a trigger in more than 50% of patients. GBS is a neurological emergency that consists of an acute polyradiculoneuropathy that can present with symptoms such as symmetrical paresthesia and loss of strength with an upward progression in most cases (SEDAGHAT; KARIMI, 2020).

CASE REPORT

A 40-year-old female patient without comorbidities presented with the flu-like illness caused by COVID-19, with a diagnosis confirmed by the RT-PCR method. Two

weeks later, the patient was admitted to the emergency room with bilateral weakness in the lower limbs, progressing upwards and rapidly progressively to the upper limbs and trunk. On physical examination, the patient had hyporeflexia.

The patient was admitted to the intensive care unit due to associated mild-moderate respiratory failure. Neuroaxis resonance was performed without alterations and CSF, which showed proteinorrachia. Clinically, Guillain-Barré Syndrome was suspected and treatment with intravenous immunoglobulin was started with progressive reversal of symptoms.

DISCUSSION

The pandemic caused by the SARS-CoV-2 virus was responsible for numerous deaths, sequelae and multisystem involvement from respiratory, renal and neurological disorders. Among these conditions, Guillain-Barré Syndrome (GBS) – which is characterized by acute immune-mediated polyneuropathy – was identified and described in numerous cases, inferring the possibility of association between the infection conditions (SOUSA et al, 2022).

It is known that the diagnosis of GBS is linked to a state of respiratory or gastrointestinal post-infection, with frequent manifestations: symmetrical ascending paralysis, loss of deep tendon reflexes and sensory deficits, being among the most common acute flaccid paralysis (ABU-RUMEILEHS et al, 2021).

What has been observed with regard to infection by the SARS-CoV-2 virus is not only an inflammatory response but also a tendency to present a state of hypercoagulability culminating in significant tissue damage. Despite this, the hypothesis of the virus directly attacking the peripheral nerves is still unlikely, with the possibility of an aberrant immune response condition arising due to the inflammatory factor and the neuroinvasive

conduction of the GBS virus, since the production of several inflammatory cytokines promotes immune-mediated processes. (MOHAMMADI et al, 2020; GHANNAM et al, 2020; HUANG et al, 2020).

However, there are reports of direct viral damage to the central nervous system caused by invasion by SARS-CoV-2 through the blood-brain barrier or retrograde axonal transport through the olfactory nerve (LEHMANN HC et al, 2021).

CONCLUSION

There are already described cases of Guillain-Barré Syndrome after COVID-19, which argues in favor that the SARS-COV-2 virus can be a triggering factor of this syndrome, but the medical literature still lacks studies that prove this relationship .

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