

# The Use of Benzodiazepines in the Context of Coronavirus Related Severe Acute Respiratory Syndrome: A Case Report

Jadison Luiz Barbosa Junior<sup>1,\*</sup>, Paulo Henrique Teixeira Prado<sup>2</sup>, Thales Pimenta de Figueiredo<sup>3</sup>, Caio Hage Chahine Kubrusly<sup>4</sup>, Isabela Maria Seabra Leite<sup>5</sup>, Luiz Filipe Silva Codorino Couto<sup>6</sup>, Paulo Marcos Brasil Rocha<sup>7</sup>

<sup>1</sup>MD, Hospital das Clínicas da Universidade Federal de Minas Gerais (HC-UFGM), Brazil

<sup>2</sup>MD, Universidade Federal de Minas Gerais (UFMG), Brazil

<sup>3,4,5</sup>MD, Hospital das Clínicas da Universidade Federal de Minas Gerais (HC-UFGM), Brazil

<sup>6</sup>MD, Hospital das Clínicas da Universidade Federal de Minas Gerais (HC-UFGM), Brazil

<sup>7</sup>MD, PhD, Professor Adjunto, Departamento de Saúde Mental, Universidade Federal de Minas Gerais (UFMG), Brazil

## ABSTRACT

COVID-19 pandemic increased depression and anxiety worldwide and, although benzodiazepines are effective against acute anxiety, they are known to compromise respiratory physiology. Currently, however, no firm guidelines for benzodiazepine use in people with acute COVID-19 are available and there is sparse medical literature regarding benzodiazepine use in patients with active COVID-19 infection and acute anxiety symptoms. Therefore, we report in this correspondence a remarkable case regarding the parsimonious yet safe use of lorazepam for recurrent panic attacks during the course of active COVID-19 infection with severe acute respiratory syndrome. Benzodiazepines not only ceased panic attacks, but also improved respiratory parameters, as patient became less agitated and stopped manipulating his noninvasive ventilation devices. We further performed a narrative review of the literature, searching for studies regarding benzodiazepine use for acute anxiety in patients with COVID-19.

**Keywords:** Covid-19, Anxiety, Panic, Benzodiazepine, Respiratory.

## ABBREVIATIONS

ICU: Intensive Care Unit; SARS: Severe Acute Respiratory Syndrome; PDSS: Panic Disorder Severity Scale; CGI-PD: Clinical Global Impressions Scale for Panic Disorder.

## LETTER TO THE EDITOR

Dear editor,

Throughout the COVID-19 pandemic, anxiety incidence has increased substantially [1]. We would like to report a case of a 60-year-old admitted to intensive care unit (ICU) due to Coronavirus severe acute respiratory

## Vol No: 08, Issue: 03

Received Date: August 26, 2023

Published Date: October 05, 2023

## \*Corresponding Author

**Dr. Jadison Luiz Barbosa Junior, MD**

Hospital das Clínicas da Universidade Federal de Minas Gerais (HC-UFGM), Avenida Professor Alfredo Balena, 190, sala 267/Belo Horizonte-MG, Postal Code: 30130-100, Tel: +55 0xx 31 99121-2064, Brazil

**E-mail:** jadisonjunior@gmail.com

**Citation:** Jadison LBJ, et al. (2023). The Use of Benzodiazepines in the Context of Coronavirus Related Severe Acute Respiratory Syndrome: A Case Report. Mathews J Psychiatry Ment Health. 8(3):42.

**Copyright:** Jadison LBJ, et al. © (2023). This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

syndrome (SARS). He had a previous diagnosis of panic disorder in clinical remission for one year along with clinical comorbidities. Since admission, panic attacks resumed daily, leading to severe acute stress and respiratory deterioration. Thus, despite the acute respiratory condition, ICU medical staff decided it was mandatory to effectively manage the acute anxiety symptoms and prescribed Clonazepam 4mg/day.

Six days after hospital admission, the patient was still in ICU and panic attacks persisted. A worsening of respiratory function occurred after each panic attack. Alongside, the patient was manipulating his noninvasive ventilation devices, inducing more respiratory distress. Thus, consultation liaison psychiatry assessment was requested and suggested lorazepam 4mg/day instead of clonazepam, due to its shorter half-life, along with citalopram 20mg/day.

At first psychiatric assessment, Panic Disorder Severity Scale (PDSS) reached 10 points and Clinical Global Impressions Scale for panic disorder (CGI-PD) reached 3 points. Two days after, lorazepam was increased to 6mg/day, due to persistent panic attacks. No panic attacks occurred after this dose increase. After three days, lorazepam was returned to 4mg/day and patient was discharged from ICU, with no respiratory distress. One week later, PDSS and CGI-PD scored both zero.

This case is remarkable because the effective management of panic attacks with the parsimonious yet safe use of benzodiazepines was associated with clinical improvement, even in the context of acute respiratory distress, as the patient obtained relief from anxiety symptoms, became less agitated and stopped manipulating his noninvasive ventilation devices. Panic disorder is a common anxiety disorder that usually requires benzodiazepines use, drugs known to depress central respiratory drive and chemoreceptor responsiveness to hypercapnia and to decrease inspiratory and expiratory respiratory muscle strength [2].

A literature review was performed in October 2021 in Pubmed, APA PsycNET, Bireme, and SciELO, regarding benzodiazepine use in patients with COVID-19. Only four articles were found, but none of them related to our subject of interest. We searched for “benzodiazepine AND (“COVID-19” OR “SARSCoV-2” OR “coronavirus disease” OR “severe acute respiratory syndrome coronavirus 2”)” and for (“panic disorder” OR “panic attack” OR “anxiety”) AND (“treatment” OR “management”) AND (“COVID19” OR “SARS-CoV-2” OR “coronavirus disease” OR “severe acute respiratory syndrome coronavirus 2”)). Nonetheless, we

found three relevant studies through Scholar Google search. Unsurprisingly, no firm guidelines are currently available. Caldirola and Perna [3] highlight that panic disorder patients are hypersensitive to physical symptoms and respiratory stimuli, resulting in a complex clinical presentation. In patients with COVID-19, Oztuziet al [4] and Khawam et al [5] recommend benzodiazepines should be avoided. Nevertheless, when mandatory, the authors suggest short-term half-life benzodiazepines should be preferred. Thus, herein we reported the safety use of Lorazepam in the context of acute panic attacks during the course of SARS-Cov2 infection, which reinforces these recommendations. More studies are needed to guide clinicians in the management of this clinical situation.

#### SOURCES OF SUPPORT AND SOURCES OF FUNDING

None.

#### DISCLAIMERS AND CONFLICT OF INTEREST DECLARATIONS

The authors report no conflict of interest. The authors are responsible for the content and writing of the paper.

#### REFERENCES

1. Santomauro D, Herrera AM, Shadid J, Zheng P, Ashbaugh C, Pigott DM et al. (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *Lancet*. 398(10312):1700-1712.
2. Vozoris N. (2014). Do benzodiazepines contribute to respiratory problems? *Expert Rev Respir Med*. 8(6):661-663.
3. Caldirola D, Perna G. (2021). COVID-19 and panic disorder: clinical considerations for the most physical of mental disorders. *Braz J Psychiatry*. 43(1):110-111.
4. Ostuzzi G, Papola D, Gastaldon C, Schoretsanitis G, Bertolini F, Amaddeo F, et al. (2020). Safety of psychotropic medications in people with COVID-19: evidence review and practical recommendations. *BMC Med*. 18(215):1-14.
5. Khawam E, Khouli H, Pozuelo L. (2021). Treating acute anxiety in patients with COVID-19. *Cleve Clin J Med*. 1-4.