

## Case Report

# Treatment of anosmia caused by COVID-19: case report

Jose M. P. De Godoy<sup>1,3\*</sup>, Livia M. P. De Godoy<sup>3,4</sup>, Henrique J. P. De Godoy<sup>2,3</sup>,  
Maria De F. G. Godoy<sup>2,3</sup>

<sup>1</sup>Department of Cardiology and Cardiovascular Surgery, <sup>2</sup>FAMERP, São José do Rio Preto, Brazil

<sup>3</sup>Clinica Godoy, Sao Jose do Rio Preto, Brazil

<sup>4</sup>Instituto Lauro de Souza Lima, Bauru, Brazil

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### \*Correspondence:

Dr. Jose M. P. De Godoy,

E-mail: [godoyjmp@gmail.com](mailto:godoyjmp@gmail.com)

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## ABSTRACT

The aim of the present study was to report the reversal of anosmia within minutes in a patient with a one-month history of COVID-19. Self-reported olfactory and taste (sweet, sour, bitter, and salty) disorders and anosmia are common in patients having had COVID-19. However, there is no specific treatment described in the literature. The present study reports a case of a 23-year-old patient with a one-month history of COVID-19 and anosmia who experienced an immediate improvement in symptoms with the use of cervical and facial lymphatic therapy.

**Keywords:** COVID-19, Anosmia, Sequelae, Treatment

## INTRODUCTION

Several similar neurological complications result from severe acute respiratory syndrome coronavirus 1 (SARS-CoV-1), Middle East respiratory syndrome coronavirus (MERS-CoV), and coronavirus 2019 (COVID-19). However, the scope of the epidemics and the number of patients is quite different. The most common neurological complaints following COVID-19 are anosmia (loss of the sense of smell), ageusia (loss of the sense of taste) and headache. However, more severe complications, such as stroke, altered consciousness, seizures, and encephalopathy, have also been reported.<sup>1</sup> The typical symptoms of COVID-19 (fever and cough) are more frequent in hospitalized patients in a critical condition. However, anosmia is more frequent in non-hospitalized patients.<sup>2</sup>

The prevalence of self-reported olfactory disorders, general taste disorders, reduced quality of taste (sweet, sour, bitter, and salty) and anosmia in patients with COVID-19 is 82.4%, 76.2%, 52.2%, 56.1%, and 42.9%,

respectivamente.<sup>3</sup> A preliminary study suggests that the effect of COVID-19 on the olfactory apparatus can be determined with conventional neuroimaging methods and may serve as a noninvasive biomarker of infection.<sup>4</sup>

Olfactory dysfunction associated with COVID-19 has considerable similarities in terms of epidemiological trends and sequelae from other viruses suggest identical physiopathological mechanisms.<sup>5</sup> To date, there are no reports of specific treatments to reverse this condition in such patients.

The aim of the present study was to report the reversal of anosmia within minutes in a patient with a one-month history of COVID-19.

## CASE REPORT

A 23-year-old patient with a 30-day history of COVID-19 visited the clinic with the complaint of anosmia. The patient initially experienced fever and the loss of taste, but the sense of taste improved after one month. The patient

also had primary (congenital) lower limb lymphedema and had been treated with monotherapy involving cervical lymphatic therapy (Godoy & Godoy method®) until 16 years of age. At the time, the patient had not been undergoing treatment for seven years and the limbs were within the standards of normality. However, another session of cervical lymphatic therapy was performed and the patient was instructed to return the following day. Upon his return, the patient reported smelling smoke as soon as he had left the clinic. Another 20 minutes of cervical lymphatic therapy and 20 minutes of lymphatic therapy specific for the nose using the Godoy method® was proposed. The patient reported the return of the sense of smell returned during treatment to the standards of normality. He was asked to smell cotton balls with different types of aromas and recognized the smells.

## DISCUSSION

The present study reports and observational finding during the treatment of lymphedema using the Godoy method of cervical and manual lymphatic therapy.<sup>6-9</sup> The patient's report of olfactory improvement (smelling smoke) led the team to prioritize systemic drainage involving cervical lymphatic therapy combined with focal treatment of the nose involving linear manual lymphatic therapy. The immediate response suggests a treatment possibility for such patients. Cervical lymphatic therapy reverses clinical fibrosis of the head and neck region in patients with important limitations following treatment for cancer and is the first clinical treatment for primary (congenital) lymphedema. This form of treatment enables the reversal of inflammatory and fibrotic processes and has a systemic effect, which may improve other symptoms associated with COVID-19.

The Godoy method initially proved that it is possible to reverse clinical fibrosis during the treatment of lymphedema, including elephantiasis. The effects were then evaluated using high-frequency ultrasound and the first histological comparisons before and after treatment have confirmed the reversal of the fibrotic process. The use of the method adjusted to the physiopathology of each case offers novel treatment possibilities for patients with sequelae from COVID-19.

The literature reports that chemosensory symptoms are not associated with the severity of COVID-19. In a median time of more than two months after the onset of symptoms, the total and partial olfactory recovery rates are 53.8% and 44.7% and the complete or partial recovery of taste is 68.3% and 27.6%. Nearly all patients seem to recover a significant part of the sense of smell and taste in the first four months after the onset of symptoms.<sup>3</sup> Thus, clinical recovery is satisfactory, but involves several months of discomfort and a novel, fast, effective treatment option is suggested.

## CONCLUSION

Cervical lymphatic therapy combined with linear manual therapy using the Godoy & Godoy method led to an immediate improvement in anosmia in a patient with a sequela of COVID-19.

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## REFERENCES

1. Sharifian-Dorche M, Huot P, Oshero M, Wen D, Saveriano A, Giacomini PS, Antel JP, Mowla A. Neurological complications of coronavirus infection; a comparative review and lessons learned during the COVID-19 pandemic. *J Neurol Sci.* 2020;417:117085.
2. Giorli A, Ferretti F, Biagini C, Salerni L, Bindi I, Dasgupta S, et al. A Literature Systematic Review with Meta-Analysis of Symptoms Prevalence in Covid-19: the Relevance of Olfactory Symptoms in Infection Not Requiring Hospitalization. *Curr Treat Options Neurol.* 2020;22(10):36.
3. Brandão Neto D, Fornazieri MA, Dib C, Di Francesco RC, Doty RL, Voegels RL, Pinna FR. Chemosensory Dysfunction in COVID-19: Prevalences, Recovery Rates, and Clinical Associations on a Large Brazilian Sample. *Otolaryngol Head Neck Surg.* 2021;164(3):512-8.
4. Strauss SB, Lantos JE, Heier LA, Shatzkes DR, Phillips CD. Olfactory Bulb Signal Abnormality in Patients with COVID-19 Who Present with Neurologic Symptoms. *Am J Neuroradiol.* 2020;10.3174.
5. Imam SA, Lao WP, Reddy P, Nguyen SA, Schlosser RJ. Is SARS-CoV-2 (COVID-19) postviral olfactory dysfunction (PVOD) different from other PVOD? *World J Otorhinolaryngol Head Neck Surg.* 2020;10:1016.
6. de Godoy JM, Godoy Mde F, Meza MC. Godoy & Godoy technique of cervical stimulation in the reduction of edema of the face after cancer treatment. *QJM.* 2008;101(4):325-6.
7. de Godoy JM, de Godoy AC, Guimarães TD, de Godoy Mde F. The godoy & godoy cervical stimulation technique in the treatment of primary congenital lymphedema. *Pediatr Rep.* 2012;4(3):e31.
8. de Godoy ACP, de Godoy JMP, Guerreiro Godoy MF. Monotherapy for the Treatment of Lymphedema in Children: A Review. *Curr Pediatr Rev.* 2022;18(3):179-81.
9. Pereira de Godoy JM, Pereira de Godoy HJ, Pereira de Godoy AC, Guerreiro Godoy MF. Case Report: Godoy & Godoy method of cervical lymphatic therapy - indirect evaluation of the effect of the duration of stimulation on ocular edema. *F1000Res.* 2022;11:112.

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