

Use of B-complex vitamins and olfactory training for treating COVID-19–related anosmia

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Abstract

A 42-year-old male patient was diagnosed with coronavirus disease 2019. His symptoms improved 2 weeks after lopinavir therapy (400 mg every 12 hours). However, he was subsequently diagnosed with complete anosmia. Magnetic resonance brain imaging showed no abnormalities. We prescribed B-complex vitamins and olfactory training. Forty days later, he recovered.

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Running title: Treatment for COVID-19–related anosmia

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ABSTRACT

A 42-year-old male patient was diagnosed with coronavirus disease 2019. His symptoms improved 2 weeks after lopinavir therapy (400 mg every 12 hours). However, he was subsequently diagnosed with complete anosmia. Magnetic resonance brain imaging showed no abnormalities. We prescribed B-complex vitamins and olfactory training. Forty days later, he recovered.

Keywords: SARS-CoV-2, COVID-19, Anosmia, Lopinavir

Key clinical message

At present, as there is no proper treatment for COVID-19-related anosmia, we recommend the use of B-complex vitamins and olfactory training for treating COVID-19-related anosmia.

CASE SUMMARY

Anosmia tends to manifest during the early stages of coronavirus disease 2019 (COVID-19).¹ A 42-year-old male patient was hospitalized for intermittent fever, dry cough, and malaise. On the third day of hospitalization, real-time reverse transcriptase–polymerase chain reaction analysis of his nasopharyngeal samples yielded a positive result for severe acute respiratory syndrome coronavirus 2; thus, the patient was diagnosed with COVID-19 and treated with 400 mg lopinavir every 12 h for 2 weeks. After 1 week of hospitalization, the patient reported losing his sense of smell in both nasal cavities. Based on olfactory function tests, he was diagnosed with complete anosmia and olfactory function tests evaluate the degree of anosmia more objectively,² which is helpful during the follow-up of patients to evaluate treatment response. Magnetic resonance brain imaging showed no abnormalities (Figure 1). Thereafter, treatment with 5000 IU of Citoneurin (Vitamin B1 [thiamine hydrochloride], 100 mg/day; Vitamin B6 [pyridoxine hydrochloride], 100 mg/day; Vitamin B12 [cyanocobalamin], 5000 mcg/day) orally and olfactory training, which consists of inhaling identified flasks containing cinnamon, cloves, and lavender for 15 minutes/day were prescribed. Repeated exposure to an odorant may modulate the regenerative capacity of the olfactory receptors.³ Subjective signs of anosmia began to improve 12 days later. Two weeks after lopinavir therapy, the patient recovered from most symptoms of COVID-19; and forty days after initiation of B-complex vitamins and olfactory training, he recovered from anosmia. We conclude that B-complex vitamins and olfactory training may be effective for the treatment of COVID-19-related anosmia.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

Conception, design of the work, manuscript preparation, and data acquisition: Yethindra Vityala, Shirin Zhumabaeva, Baktygul Imankulova, Alina Kurmanalieva, Sagynali Mamatov, Clinical management: Yethindra Vityala, Shirin Zhumabaeva, Sagynali Mamatov, and Manuscript preparation and data acquisition: Yethindra Vityala, Alina Kurmanalieva, Baktygul Imankulova.

DATA AVAILABILITY STATEMENT

Data are available from the corresponding author upon reasonable request.

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