

Integrated therapy as a tool to help fight asymptomatic COVID-19: A case report

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ABSTRACT

COVID-19 is a rapidly changing and evolving situation and is extremely challenging to the humankind since it is highly infectious. Around 80% of the COVID-19 patients are asymptomatic but still need special care so that they don't develop any further serious complications in due course of infection. The aim of present case study was to assess the effect of integrated therapy of yoga and Ayurveda on vital parameters of a COVID-19 positive asymptomatic patient. He was found to be COVID-19 positive with ORF CT value of 29.85. He remained asymptomatic throughout the course of disease. Vital parameters such as body temperature, oxygen saturation, and heart rate remained optimal throughout the course of infection. This was probably due to physical activity such as walking, yoga and Ayurvedic medications which helped in building of immunity. This further prevented progression of the disease to moderate/severe stage and there were no unanticipated events. The patient was rechecked after 8 days and was found to be COVID-19 negative. This implies that Yoga and Ayurveda treatment is effective in controlling symptoms of COVID-19 and prevention of disease progression.

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Introduction

COVID-19 is a novel respiratory disease caused by SARS-CoV-2 (severe acute respiratory syndrome coronavirus-2) emerged initially in Wuhan, Hubei Province, China in December 2019. Globally, there have been 141,754,944 confirmed cases of COVID-19, including 3,025,835 deaths, reported to WHO as of 20th April, 2021. A total of 843,158,196 vaccine doses have been administered as of 19 April 2021 (1).

(COVID-19 is a rapidly changing and evolving situation and is extremely challenging to the humankind since it is highly infectious). The CoV-2 is transmitted via person-to-person in both family and hospital settings (2). Further, recent study suggests that SARS-CoV-2 spreads by airborne transmission (3). The symptoms of COVID-19 include fever, cough, fatigue, nasal congestion, dizziness, arthralgia, diarrhea, and rashes (4). However, according to Indian Health Ministry analysis, majority of the COVID-19 positive individuals are asymptomatic. Even though asymptomatic, these patients need special care so that they don't develop any further serious complications in due course of infection. (The aim of present case study was to assess the effect of integrated therapy of yoga practices and Ayurveda on vital parameters of a COVID-19 positive asymptomatic patient).

Case presentation

Mr. X aged 47 years was a healthy, active Indian male with a height of 180 cm and weighing 75 kg. He has always followed

an active lifestyle which included regular walking, exercise and yoga practices along with a vegetarian diet. The patient has been practicing yoga for the past 20 years along with active lifestyle.

Present Medical History

Mr. X was suffering from a dental problem since past one year but avoided a visit to the dentist due to prevalent pandemic situation and subsequent lockdown. However, on 18th February, 2021, he decided to visit his local dentist for his dental problem as the pain was unbearable due to underlying sinusitis. He had two cavities and required a cavity filling procedure which took around 45 minutes at the dental clinic.

Mr. X had a scheduled work-related travel to New Delhi for which he had to carry a COVID-19 negative RT-PCR test report. Therefore, he got himself tested on 22nd February, 2021 and received a negative RT-PCR report on 23rd February, 2021. Thus, he proceeded with his travel plans to New Delhi and returned on 25th February, 2021.

Upon return, Mr. X got himself tested again on 26th February, 2021 for COVID-19 as per the standard COVID-19 protocol at his workplace. On 27th February, 2021, he was found out to be COVID-19 positive with ORF CT value of 29.85. This was confirmed once again on 29th February, 2021, wherein ORF CT value was 30.91 (15).

Clinical Findings

Mr. X was asymptomatic and quarantined himself in a separate room. His body temperature and SpO₂ were checked

regularly twice a day using infrared thermometer (EVERY-COM, India) and pulse oximeter (RoHS, India) respectively, for 8 days. Further, sleep score, resting heart rate and walking steps were recorded for 8 days using Fitbit Charge 3 (Table 1).

There were no clinical symptoms of COVID-19 infection throughout the course of the disease. However, Mr. X experienced burning sensation while urination on the 4th day of infection. This symptom was managed by increasing water intake for next few days. Mr. X was rechecked on 5th March, 2021, and the results were found to be COVID-19 negative.

Table 1: Timeline of the Case

Date	Body Temp AM/PM	SpO ₂ AM/PM	Resting Heart Rate	Sleep Score	Steps taken in a day
27 th February	96.9/96.9	98.8	72	82	16724
28 th February	96.0/96.07	98.7/98.8	70	82	13638
1 st March	96.8/96.8	98.75/98.85	69	82	13390
2 nd March	95.1/96.6	98.85/98.87	68	85	14911
3 rd March	96.06/96.06	98.80/98.80	68	76	12635
4 th March	95.03/96.09	98.80/98.85	67	87	12392
5 th March	96.4/96.6	98.67/98.80	67	81	13347
6 th March	96.8	98.78	67	87	13318

Therapeutic intervention comprised Ayurvedic medications, yoga practices and regular walking. Mr. X had self-quarantined from the first day of COVID-19 positive report. The details of the therapeutic intervention have been presented in Table 2. During his quarantine, Mr. X practiced Yoga for 30 minutes each morning and utilized the 15 m walking space in his room for covering a distance of approximately 5 km, as recorded by his fitness tracker. Further, he also did steam inhalation twice a day for about 3 minutes. Mr. X had been practicing Jala Neti every morning since last six months and continued to practice it.

Table 2: Therapeutic Intervention

Sr. No.	Treatment/Practice	Duration/Intensity
Yoga Practices		
1.	Parvatasana	The poses were maintained as per comfort.
2.	Chakrasana	
3.	Tadasana	
4.	Pavanmuktasana	
5.	Simha Mudra-Deep exhalation	
6.	Kapalbhati	120 strokes-3 rounds-Moderate thrust
7.	AnulomVilom	11 rounds
8.	Bhramari	10 rounds, thrice a day
Total		30 min

Sr. No.	Treatment/Practice	Duration/Intensity
9.	Jala Neti	Every morning since past 6 months
Physical Activity		
1.	Walking	5 km/day
Ayurvedic Medicine		
1.	Giloy Ghanvati 500 mg	1 tablet/day
2.	Garlic Supplement 500 mg	1 tablet/day
3.	Sudarshan Talisadi Churna	1 spoon after food twice a day
4.	Steam inhalation	3 min twice a day

Mr. X was following all norms of social distancing and wore a face mask whenever he stepped out of his house before first COVID-19 positive report. However, as part of the contact tracing protocol, 5 people including family members and office staff were tested and found to be 'Negative' for COVID-19. All the contacts wore face masks and followed social distancing norms while interacting with the patient. Vital parameters such as body temperature, oxygen saturation and heart rate were monitored throughout the disease and found to be optimal. This was probably due to physical activity such as walking, yoga practices and Ayurvedic medications.

Discussion

The results of present case study showed that yoga practices, Ayurveda and active lifestyle are effective in preventing progression of COVID-19 infection to moderate/severe stages. The vital parameters of the patient were found to be stable throughout the course of infection. The patient used to follow active lifestyle such as 5 km walking and yoga practice for 30 minutes every morning prior to being diagnosed as COVID-19 positive.

Earlier research studies have demonstrated that active lifestyle such as daily walking and yoga practices can lead to improvement in immune system (5, 6, 7). Moreover, Ayurvedic medicines such as Giloy Ghanvati (8), garlic supplements (9), Talisadi have been found to have immunomodulatory and anti-inflammatory properties (10). Additionally, Jala Neti (nasal irrigation) is beneficial in inhibition of replication of RNA and DNA viruses (11). Furthermore, it is evident from recent study that use of Yoga and Ayurveda therapy is effective in the treatment of high risk COVID-19 positive patients (12, 13). In the present case, Mr. X was practicing Jala Neti since last six months which might have prevented replication of SARS-CoV-2 and subsequent progression of disease. Continuous practice of yoga and walking might have helped him in strengthening the immune system and preventing progression of the disease.

In fact, innate immunity plays an important role in evasion of initial viral attack, and may play an indispensable role in pathogenesis in asymptomatic patients (14). In the present case, the patient visited the dentist on 18th February, 2021 and underwent a dental procedure which took about 45 minutes. While it is difficult to pinpoint the day when he got infected,

the visit to the dentist seems to be a more likely cause. The need to remove face mask while undergoing dental treatment might have increased the risk to contract infection to a greater extent. We suspect that the dentist visit is a more likely cause of COVID-19 infection than travel to New Delhi, because airports are following strict protocols for preventing the spread of COVID-19 and have implemented ways to ensure safe travel. In addition, the patient followed all norms of social distancing, wore face mask, washed hands frequently, used hand sanitizer and did not touch his face throughout his journey, as per WHO travel guidelines. However, the possibility of catching the infection during travel cannot be entirely ruled out.

Since the vital parameters were stable and normal, and the patient was asymptomatic, it can be inferred that the patient's immune system worked well against the virus to thwart the onset of severe symptoms. However, to establish the efficacy of integrated therapy of yoga practice and Ayurveda in COVID-19 infection, randomized controlled trials on a larger sample size are warranted. (The limitation of present case report is that several biochemical and physiological parameters were not assessed as the patient was asymptomatic).

Conclusion

Yoga and Ayurveda therapy along with active lifestyle are effective in controlling symptoms of COVID-19 and prevent progression of disease. Therefore, it can be concluded that innate immunity plays an important role in reducing the severity of symptoms.

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Authorship contribution

ST has conceptualized the manuscript. SS and AV prepared first draft of the manuscript and ST finalized the article.

Informed consent

Signed informed consent was obtained from the patient before conducting this case study.

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Conflict of interest

Nil.

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References

1. Covid19.who.int, 2020. WHO Coronavirus Disease (COVID-19) Dashboard. Available at: <https://covid19.who.int/>. Accessed October 27, 2020.
2. Meyerowitz EA, Richterman A, Gandhi RT, Sax PE. Transmission of SARS-CoV-2: A review of viral, host, and environmental factors. *Annals of internal medicine*. 2021; 174(1):69-79.
3. Greenhalgh T, Jimenez JL, Prather KA, Tufekci Z, Fisman D et al. Ten scientific reasons in support of airborne transmission of SARS-CoV-2. *The Lancet*. 2021.
4. Hu Z, Song C, Xu C, Jin G, Chen Yet al. Clinical characteristics of 24 asymptomatic infections with COVID-19 screened among close contacts in Nanjing, China. *Sci China Life Sci*.2020; 63.
5. Nieman DC, Wentz LM. The compelling link between physical activity and the body's defense system. *J Sport Health Sci*. 2019;8:20117.
6. Shete SU, Verma A, Kulkarni DD, Bhogal RS. Effect of yoga training on inflammatory cytokines and C-reactive protein in employees of small-scale industries. *J Educ Health Promot*. 2017; 9(6):76.
7. Fruhauf A, Schnitzer M, Schobersberger W, Weiss G, Kopp M. Jogging, nordic walking and going for a walk—interdisciplinary recommendations to keep people physically active in times of the covid-19 lockdown in Tyrol, Austria. *Current Issues in Sport Science*. 2020;4:100.
8. Saha S, Ghosh S. *Tinospora cordifolia*: One plant, many roles. *Ancient science of life*. 2012; 31(4):151-159.
9. Mustafa MD, Orkide D. The effects of allium sativum on immunity within the scope of COVID-19 infection, *Medical Hypotheses*. 2020;144:109934.
10. Devpura G, Tomar BS, Nathiya D, Sharma A, Bhandari D, Haldar S, Balkrishna A, Varshney A. Randomized placebo-controlled pilot clinical trial on the efficacy of ayurvedic treatment regime on COVID-19 positive patients. *Phytomedicine*. 2021;84:153494.
11. Panta P, Chatti K, Andhavarapu A. Do saline water gargling and nasal irrigation confer protection against COVID-19? *EXPLORE*. 2021;17(2): 127-129.
12. Mishra A, Bentur SA, Thakral S. et al. The use of integrative therapy based on Yoga and Ayurveda in the treatment of a high-risk case of COVID-19/SARS-CoV-2 with multiple comorbidities: a case report. *J Med Case Reports*. 2021; 15: 95.
13. Golechha M. Time to realise the true potential of Ayurveda against COVID-19. *Brain Behav Immun*. 2020;87:130-131.
14. Dogra P, Ruiz-Ramirez J, Sinha K, Butner JD, Pelaez MJ, Rawat M, Yellepeddi VK, et al. Innate immunity plays a key role in controlling viral load in COVID-19: Mechanistic insights from a whole-body infection dynamics model. *ACS Pharmacology & Translational Science*. 2021;4(1):248-265.
15. Tom MR, Mina MJ. To Interpret the SARS-CoV-2 test, consider the cycle threshold value. *clinical infectious diseases: An official publication of the Infectious Diseases Society of America*. 2020.