

## Virtual Chest Physiotherapy for COVID-19 Patients

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### Abstract

**Objective:** This case report addressed the idea about the effect of virtual chest physiotherapy in improving the respiratory complications in COVID-19 patient.

**Methodology:** A 50-year-old female diagnosed with COVID-19 positive at Mahatma Gandhi Medical College and Research Institute, Pondicherry with no specific complaints and quarantined in home and as a preventive measure. We treated with diaphragmatic deep breathing exercise, chest mobility exercise, and incentive spirometry virtually through video call for duration 2 weeks consisting of 2 sessions per day. Case reviewed after 2 weeks with confirmed COVID-19 negative, we made an assessment on chest expansion and respiratory rate.

**Results:** Patient showed normal respiratory rate of 21 per minute and chest expansion of 2.5 cm.

**Conclusion:** Virtual chest physiotherapy found to be an effective mode of treatment for COVID-19 patient under home quarantine.

**Keywords:** Virtual chest physiotherapy; COVID- 19; Home quarantine

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## Introduction

Corona virus disease (COVID-19) is an infectious disease caused by a newly discovered corona virus. Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment. COVID -19 can be cured at home, if necessary restrictions and guidelines are followed. It depends on the extend the disease has spread in one's body that influences the decision of whether one should self-quarantine at home or get admitted to a hospital. According to government of India guidelines patient under home isolation will be back to normal life after 10 days of onset of symptom and no fever for 3 days. Thereafter, the patient will be advised to isolate at home and self-monitor their health for further 7 days [1].

The virus that causes COVID-19 is mainly transmitted through droplets generated when an infected person coughs, sneezes, or exhales. These droplets are too heavy to hang in the air, and quickly fall on floors or surfaces. You can be infected by breathing in the virus if you are within close proximity of someone who has COVID-19, or by touching a contaminated surface and then your eyes, nose or mouth [2].

## Methodology

After getting the phone number and details of the patient from the COVID-19 cell of Mahatma Gandhi Medical College and Research Institute in Pondicherry, Virtual chest physiotherapy was given to the patient through video call 2 sessions per day for two weeks, with single session duration of 30 minutes. Virtual chest physiotherapy consist of diaphragmatic deep breathing exercise 50 counts, incentive spirometry 50 counts and followed by chest mobility exercise. At the end of the home quarantine the patient underwent COVID-19 screening and diagnosed negative. With the result she came to Mahatma Gandhi medical college and research institute for follow up and we made an assessment on respiratory rate and chest expansion with the help of stop watch and inch tape [3-5].

## Results and Discussion

After the assessment we found the respiratory rate of the patient is 21 breaths /minute and the chest expansion is 2.5 cm which are normal. Since the patient is confirmed COVID-19 and treatment mode is virtual, there is lot of limitation in this study. There is no baseline data for comparison. Administration and monitoring

of the treatment was difficult. In spite of those we managed and continued the treatment sessions as mentioned above. The patient is apparently normal and asymptomatic because of that only she was home quarantined. Initially the patient found difficult to perform and follow the treatment and later she found easy and cooperated well. When she came to the hospital her respiratory rate was 21 breaths /min and the chest expansion was 2.5 cm. These values are absolutely normal for healthy individual

but we don't have the pre-test values to compare with current values.

## Conclusion and Recommendations

According to the results it is concluded that the virtual chest physiotherapy is found to be an effective treatment for COVID-19 patients under home quarantine. A study of this kind in larger samples is needed for further references.

## References

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