

Use of Steam as Adjuvant-treatment in Covid-19 Patients: An Observational Study

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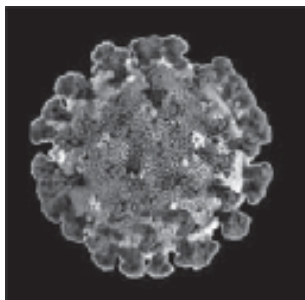
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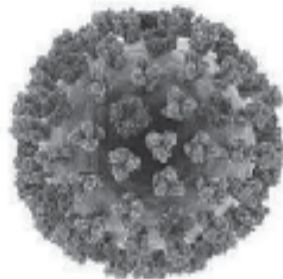
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Aims and Objectives

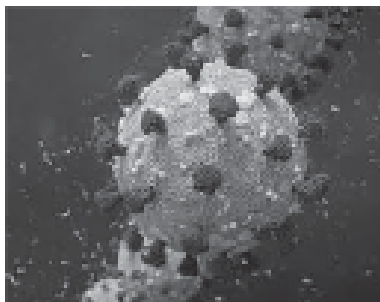
Steam has been used for centuries as a means of treatment for Influenza virus or common flu.



Influenza Virus



Covid-19 Virus



SARS Corona virus

Coronavirus is structurally similar to influenza virus and SARS corona Virus. Previous studies on corona virus and influenza virus show a strong heat correlation.

This study was aimed at studying through rational observation the effect of heat and humidity on Covid-19 virus infection.

Materials and Methods

The study was divided into 2 groups.

Group 1 was consisting of asymptomatic patients exposed to covid-19 patients either through travel or direct contact. This group included doctors and Nurses.

These patients were advised to take steam twice daily by inhalation through ordinary steamers available on the market or by simple boiling of water and inhalation of resulting steam.

This study was conducted at Seven Hills Hospital which is a Dedicated Covid Hospital managed by Municipal Corporation of Greater Mumbai.

Group 2 patients were further divided into Mild and Moderate

Mild symptoms were of only 1 area like nasal, throat or bronchial.

Moderate symptoms were where 2 or more areas were involved

Severe patients were where there was dyspnea and required ventilator or oxygen support.

Severe symptoms patients were excluded from the trial.

The patients continued the treatment as per hospital protocol

Patients were tested for covid -19 after steam therapy after 5 days and till covid was negative for 2 consecutive tests.

Group 2 consisted of Symptomatic patients tested positive on the standard Covid-19 test.

Most of these patients were medical staff which included doctor and nurses from Public hospitals who had contracted covid in the line of their work.

The number of patients in group 1	25 Health Care workers
No of patients in group 2	80 Patients and Health care workers

Steam was administered in following doses

Group 1 - Steam twice daily or more for 5 minutes by nasal route with intermittent breathing by oral route.

Group 2 - Steam inhalation was administered by nasal and oral route every 3 hours for 5 minutes.

Results

None of the patients in Group 1 showed any sign of progression to Covid symptoms after a follow-up ranging from 14 days to 2 months.

In group 2 Mild symptoms regressed in 3 days to normal and in moderate symptoms it took 7 to 10 days to return to normal.

The covid-19 test done after 10 days was negative in 65 cases.

In 13 cases it took 14 days for Covid test to return to negative.

In 2 cases it took 18 days for Covid test to return to negative.

Discussion

The stability of the virus at different temperatures and relative humidity on smooth surfaces were studied. The dried virus on smooth surfaces retained its viability for over 5 days at temperatures of 22-25°C and relative humidity of 40-50%, that is, typical air-conditioned environments. (1)

However, virus viability was rapidly lost (>3 log(10)) at higher temperatures and higher relative humidity (e.g., 38°C, and relative humidity of >95%)

Steam has a temperature of about 70° to 80° Celsius which is well above the instability temperature of SARS Corona virus.

Influenza virus studies in humans and Guinea pigs also show a similar pattern. Most of influenza virus is inactivated above 30° Celsius (2)(3).

Conclusion

The Covid -19 virus symptoms drastically reduced after the administration of steam. No further transmission was observed in patients taking steam.

The reversal of symptoms in patients which were covid-19 is a welcome sign.

It was concluded that steam can be permitted as an adjunct to social distancing, sanitizers and masks and PPE for an effective treatment for precaution as well as cure for covid-19 infection.

This is an observational study. It warrants an extended random Control trial to see the full effect of steam on a larger group of patients and medical staff.

Further studies are required on a larger scale in Asian and Western countries for their population.

References

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