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Partha's new techniques to counter corona virus – the usefulness of Camphor vapour and Mandl's paint

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ABSTRACT

The use of N95 masks is being recommended for the control of transmission of the dreaded corona virus. As this mask is relatively costly in the Indian set up, the reuse of masks has been suggested. One of the common methods of sterilization is keeping the mask dry for three days. As a different modification of the technique, we suggest (Partha's technique) that it can be kept in a box with camphor crystals. The smell of the camphor has soothing effects in the nose with virucidal actions. Hence a simple drying can be done in a box with camphor vapour which has got added beneficial effects. Application of povidone iodine in the nose and the throat is known to have virucidal effects. But the commonly present gargles are more watery to stay in the nasopharynx. Here we suggest a paint prepared as Mandl's paint (an old preparation) which is more viscous to stay in the nasopharynx for a few hours to have a potent virucidal effect. The technique (Partha's technique) of application was by a throat swab with the paint followed touching the back of the two nostrils with cotton buds soaked in Mandl's paint.

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INTRODUCTION

Covid 19 or the corona virus pandemic is gripping the universe with the fear of death and causing a challenge to medical professionals. Out of the many techniques described to prevent this transmission, distancing, wearing of masks, including N 95 masks are considered more useful (Bartoszko *et al.*, 2020). But the N95 masks are relatively costlier to dispose

every time. Hence various methods of sterilization and reuse of masks (Swaminathan, 2020) have been elaborated. Plain drying for 72 hours has been found to be useful in decontaminating the mask devoid of corona virus. Hence, we wanted to try the same drying in the camphor vapour for 3 days to see the result in terms of comfort, nasal ease and noted side effects. Even though betadine as povidone iodine is very helpful as a virucidal, the use of the drug as a gargle is more of a liquid so that it does not stay in the nasopharynx. Hence, we tried to apply Mandl's paint in the throat and nose and look at the satisfaction and side effects. These two novel techniques and their application may be very helpful to combat corona virus.

MATERIALS AND METHODS

After the use of N95 mask, without touching the outer portion, as described, it was kept in a Tupperware airtight box with 2 grams of camphor crystals freshly taken out from a plastic packet with

adequate camphor smell (Partha's technique). This smell was certified by experts in the field of camphor business. After 72 hours, it was opened to see the camphor crystals were reduced to around 0.75 grams with strong vapour smell. The mask was taken out and worn as described. The smell was satisfactory and soothing for at least one hour for all the fifty health workers who took up this methodology voluntarily. All the volunteers felt a nasal clearance and comfort. There were no side effects. All volunteers were healthy without any comorbidities. We neither measured camphor levels nor we needed to assess the masks as just drying for 72 hours is effective to reuse. The other technique was application of nasal and transoral Mandl's paint before and after a possible viral load transmission. After thorough cleaning and alcohol swabbing of the index finger, the Mandl's paint is taken in the tip of the index finger and swabbed inside the mouth into oropharynx. Then, the buds are soaked in the paint and inserted full into the nose to touch the posterior most part (Partha's technique). The subsequent instruction for fifty asymptomatic health workers was not to eat or drink for at least an hour. Mandl's Paint is a throat paint used in the treatment of sore throat. It is composed of 1.25% iodine and 2.5% potassium iodide in peppermint oil and 90% alcohol in glycerine. Glycerine is commonly used as a base because of it being viscous. It also adheres to mucous membrane for a longer period. It also provides a sweet taste to preparation. Potassium iodide is used to prevent radioactive iodine damaging the thyroid gland. Hence a regular use may not affect the thyroid gland. The advice given was to apply the paint before and after a possible viral load. E.g. a surgery. There was a complete compliance for the application.

RESULTS AND DISCUSSION

The effects of camphor vapour have been studied by Burrow et al (Burrow *et al.*, 1983) and they have demonstrated a good feeling in the nose with a possible relief from nasal congestion even though there was no demonstrable change in airway resistance. This good feeling was essential and a probable nasal relief was complementary in the wearing of n95 masks especially in covid times. In humans, the characteristic symptoms of camphor poisoning after ingestion are nausea, vomiting, headache, dizziness, muscular excitability causing tremor and twitching, convulsions and delirium depending on the dosage which is almost 3 grams of oral ingestion which was never reached by our vapour treatment. Our technique was a simple modification of the described technique which is just drying for 72 hours. This

addition of camphor vapour also clears off any smell if it would have been there to add pleasantness during the next donning of the mask. A few studies have been published establishing the virucidal activity of camphor vapour especially against influenza viruses (Vimalanathan and Hudson, 2014; Zarubaev *et al.*, 2015). The studies have also established the anti-hemagglutinin activity of camphor vapour against influenza viruses. Weiyang et al have also established the usefulness of camphor vapour as virucidal agent (Chen *et al.*, 2013). The major limitation for us is that it's just a simple addition to plain drying to possibly extract the uses of camphor vapour without a documented viral load support. SARS CoV 2 has been demonstrated (Gharote, 2020) to start the process of replication and destruction from the nasal mucosa and the nasopharynx. Hence targeting those areas with virucidal agents is likely to be beneficial in covid19 cases. Use of povidone iodine have been found to be useful to combat corona viruses. Especially various combinations and formulations (Mady *et al.*, 2020) have been devised. We feel such a complex job is unnecessary in the presence of the old war horse like mandls paint. Regarding the use of Mandl's paint, the technique has been used by around 50 health professionals and we have found no nausea or irritation. The satisfaction was excellent in our cases. We have followed up in a few cases with thyroid profile which were normal. Many volunteers who were asymptomatic were not willing for thyroid profile after a three-month Mandl's paint application. We admit that is not a study but a simple solution to a complex problem looming around about prevention of transmission of covid19 infection.

CONCLUSIONS

We conclude that drying of N95 masks in camphor vapour for three days is easily feasible with more advantages. This gives an added advantage of comfortable reuse of N95 masks to tackle covid19. Even though there are various methods and formulations of povidone iodine, the use of Mandl's paint in the throat seems to be a viable alternative as the preparation is more viscous and stays in the throat for virucidal activity for more time to arrest the transmission and replication of the deadly virus.

Conflict of Interest

Nil.

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Contributor Ship

Dr.MRS concept, Dr SPS write up.

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