

## Short Communication

# Evaluation of the efficacy of mass prophylaxis with *Arsenicum album* 30c in mitigating the spread of COVID-19 in tribal communities of Nashik, India: a field study

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## ABSTRACT

Mass prophylaxis has long been vital in public health. This study examines the effectiveness, challenges, and ethical aspects of a COVID-19 mass prophylaxis campaign using homeopathy in tribal villages with limited healthcare access, conducted by the Motiwala Homoeopathic Medical College and Hospital. This study aimed to assess the effectiveness of a mass homeopathic prophylaxis program (*Arsenicum Album* 30) in preventing COVID-19 outbreaks in tribal communities and to identify implementation challenges in resource-limited rural areas. A mass administration of *Arsenicum Album* 30 was conducted between September 10-17, 2020, across five tribal villages in Nashik, India (population 9,586), following WHO and CCRH recommendations. Distribution involved medical staff and local health workers, with post-intervention disease surveillance. Before the campaign, one COVID-19 case existed in Mahadeopur. Post-intervention, three more cases emerged in the same village, all recovering at home with negative family tests. No new cases were reported in the other four villages until the end of December 2020. Conclusion: The mass administration of *Arsenicum Album* 30 in Nashik's tribal villages during high transmission appeared to limit virus spread. Research on implementation challenges in tribal populations is very crucial.

**Keywords:** *Arsenicum album* 30, COVID 19, Homoeopathy, Immune-booster, Mass prophylaxis

## INTRODUCTION

Coronavirus disease 2019 (COVID-19), is a pandemic that has gripped the entire world and disturbed the normal life of each individual on the face of the earth. According to the World Health Organization, there is no specific treatment for the disease, and prevention of communication of the disease is the only method to win over the disease. The WHO has suggested wearing a

mask, frequent washing of hands, and social distancing as the preventive measures to avoid contact with COVID-19 disease.<sup>1,2</sup>

Since there is no cure to the COVID-19 disease and its prevention is the only solution to contain the pandemic, the focus came on the methods of prevention of the disease and improvement of the general health of the people. People have been advised to take a healthy diet by

including the substances that promote immunity. Even ICMR gave caution to use and interpret the effect of hydro chloroquine as a prophylaxis.<sup>3</sup>

At a time when there is no known treatment for the disease in the conventional system of medicine, the AYUSH systems of medicine were looked upon for the possible treatment or preventive measures. Since Dr. Hahnemann times Homeopathy has been used to treat epidemic diseases like scarlet fever, cholera etc.<sup>4,5</sup>

The central council for research in homoeopathy after considering the symptoms of initial cases of COVID-19 from China and Europe has advised the use of Arsenicum Album 30 as a genus epidemicus for the present pandemic.<sup>4,6</sup> Based on the observation of CCRH, the Ministry of AYUSH, Government of India has recommended the use of Arsenicum Album 30, 4 pills daily on empty stomach, consecutively for three days as an Immune-booster.<sup>7-9</sup> While nodoses have been employed prophylactically within homeopathic practice, established guidelines from the Ministry of AYUSH and the central council for research in homoeopathy (CCRH) prioritize the use of Arsenicum album for such applications<sup>10</sup>.

Management of Infectious disease and use of homoeo-prophylaxis has been proven fact. Motiwala Homoeopathic Medical College and Hospital has distributed *Arsenicum album* 30, as an immune-booster in adopted villages under Unnat Bharat Abhiyan to prevent spread of COVID 19 during September to December 2020<sup>11-22</sup>.

### Objectives

To assess the effectiveness of mass prophylaxis in preventing outbreaks of COVID-19 in tribal communities. To identify the key challenges and barriers to implementing mass prophylaxis programs in rural areas. To propose strategies for optimizing the delivery and impact of mass prophylaxis in tribal communities.

### METHODS

Motiwala Homoeopathic Medical College and Hospital has been active in the distribution of Arsenicum Album 30, as an immune-booster since as early as March 2020. About 5,00,000 population of Malegaon town was given Arsenicum Album 30 mass prophylaxis during March 2020. At the beginning of our mission COVID free Malegaon, there was chaos in the town concerning the treatment and prevention of COVID-19. In the second week of April, after the distribution of Homoeopathic Immune-booster medicine, the curve of COVID-19 cases flattened.

After successful mission COVID free Malegaon, the management of Motiwala Homoeopathic Medical College and Hospital has taken up the task of Nashik city, to make

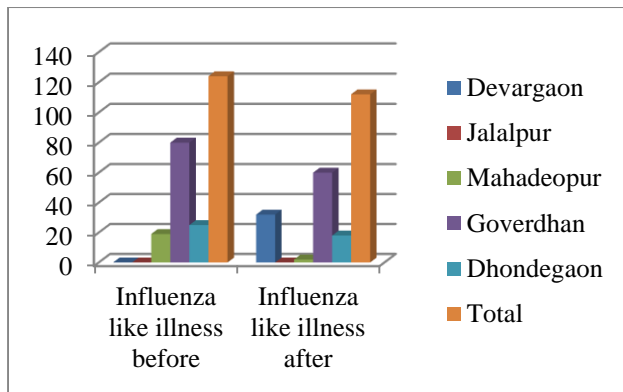
it COVID-19 free. In coordination with the authorities of the Municipal Corporation of Nashik, the institute distributed the Homoeopathic Immune-booster medicine in the five divisions of Nashik city during May-August, 2020.

In the last week of August 2020, the COVID-19 disease was reported to spread to the rural areas of the Nashik district. The management of Motiwala Homoeopathic Medical College and Hospital has resolved to keep the five villages adopted under Unnat Bharat Abhiyan COVID-19 free till the end of December 2020. These villages are very close to the Nashik city and many of the villager's commute to the Nashik city for jobs and daily living. This has prompted the management of Motiwala (National) Homoeopathic Medical College and Hospital to take up the distribution of Arsenicum album, the Homoeopathic immune-booster in these villages. All the faculty members and the 70, intern doctors of Shriman G. M. Motiwala Homoeopathic Hospital participated in the distribution of Arsenicum Album 30 to the people of all the five villages, Goverdhan, Jalalpur, Mahadeopur, Devargaon, and Dhondegaon, adopted under Unnat Bharat Abhiyan.

At the beginning of distribution of *Arsenicum album* people of the five villages were screened for symptoms mimicking Corona disease. People were also screened for presence of co-morbidities like hypertension, diabetes mellitus, asthma, cancer and other diseases. The faculty and Intern doctors went door to door to distribute Homoeopathic Immune booster medicine and advise its dosage. People of the villages were also given information regarding corona disease and its prevention. The villagers were advised to wear a mask, maintain hand hygiene, and social distancing. Asha and Angawadi workers were involved in distribution of the Homoeopathic immune-booster Arsenicum album 30. Arsenicum album was repeated each month till December, 2020. Faculty and the intern doctor conducted follow up survey after every 21 days to know if any positive case has developed in the village.

### RESULT

A population of 9586 has been distributed with Arsenicum album 30 Homeopathic medicines between 10th and 17th September, 2020. The population covered in each village is 3243 in Goverdhan, 2931 in Devargaon, 1992 in Dhondegaon, 726 in Jalalpur and 694 in Mahadeopur. The people of the village who are residing in the village center have been covered. When the institution started distribution of Arsenicum album in UBA adopted villages, Nashik district was reported to have 44,184 confirmed cases. According to the survey 409 people were found to suffer from co-morbidities like, Diabetes mellitus, Hypertension, Heart disease, kidney disease, and other diseases. It was also found that 583 people were aged above 60 years who are considered vulnerable to catch COVID-19 infection.



**Figure 1: Influenza like illness before and after administration of *Arsenicum album* 30.**

**Table 1: Showing the data observed during the mass prophylaxis in Unnat Bharat Abhiyan adopted villages.**

| UBA village particulars             | Devargaon | Jalalpur | Mahadeopur | Goverdhan | Dhondegaon | Total |
|-------------------------------------|-----------|----------|------------|-----------|------------|-------|
| Population of village               | 3432      | 2940     | 1800       | 7017      | 3142       | 18331 |
| No. of Individuals covered          | 2695      | 709      | 694        | 3255      | 1773       | 9126  |
| No. of individuals with comorbidity | 42        | 25       | 68         | 162       | 112        | 409   |
| No. of COVID-19 positive cases      | 0         | 0        | 4          | 3         | 0          | 7     |
| Individuals in Vulnerable age       | 912       | 191      | 169        | 977       | 362        | 2611  |
| Influenza like illness before       | 0         | 0        | 19         | 80        | 25         | 124   |
| Influenza like illness after        | 32        | 0        | 2          | 60        | 18         | 112   |

**Table 2: Influenza like illness before and after administration of *Arsenicum album* 30.**

| UBA village                   | Devargaon | Jalalpur | Mahadeopur | Goverdhan | Dhondegaon | Total |
|-------------------------------|-----------|----------|------------|-----------|------------|-------|
| Influenza like illness before | 0         | 0        | 19         | 80        | 25         | 124   |
| Influenza like illness after  | 32        | 0        | 2          | 60        | 18         | 112   |

## DISCUSSION

The distribution of *Arsenicum album* 30, a homeopathic medicine, to a population of 9,586 people across five villages in Nashik district between 10th and 17th September 2020, has shown noteworthy results, particularly in the context of COVID-19 prevention and control. The targeted villages- Goverdhan, Devargaon, Dhondegaon, Jalalpur, and Mahadeopur—were chosen for the intervention, with a focus on the village centers, which included people who were considered high-risk due to pre-existing health conditions or age.

Initially, Nashik district had reported 44,184 confirmed cases of COVID-19. This backdrop suggests a high potential risk for the spread of the virus in rural populations, where healthcare infrastructure may be limited. The intervention with *Arsenicum album* was undertaken as a preventive measure, with hopes to mitigate the potential spread of the virus. The survey conducted prior to the distribution identified several risk factors in the population. A total of 409 individuals were found to have comorbidities such as diabetes,

Goverdhan, Devargaon, Dhondegaon and Jalalpur villages had no COVID-19 case till the end of December, 2020. In the village Mahadeopur there was a case of COVID-19 before start of distribution of *Arsenicum Album* 30. In first follow up 3 new cases of COVID-19 positive were reported. These patients were treated at home and recovered. All the family members of these patients were tested negative for COVID-19. At the start 124 people were suffering from influenza like (COVID like) symptoms. The numbers of people suffering from influenza like (COVID like) symptoms have reduced to 80 people.

hypertension, heart disease, kidney disease, and other conditions. Comorbidities are known to increase the risk \

of severe outcomes from COVID-19. Additionally, 583 people aged above 60 years, who are more vulnerable to contracting and suffering from severe COVID-19 symptoms, were part of the intervention. These factors highlight the importance of preventive measures for this population, as they are at an elevated risk of complications from the virus.

Interestingly, the results from the survey and subsequent monitoring revealed that, by the end of December 2020, four out of the five villages-Goverdhan, Devargaon, Dhondegaon, and Jalalpur-reported no COVID-19 cases. This is a notable finding, as these villages, despite being in close proximity to Nashik (which had a high number of confirmed COVID-19 cases), were able to avoid significant outbreaks. The only exception was Mahadeopur, which had a confirmed case before the distribution of the homeopathic medicine began.

In Mahadeopur, where a case was reported prior to the start of the distribution, the situation remained relatively controlled after the intervention. In the first follow-up, three new cases of COVID-19 were reported, but these individuals were treated at home and recovered. Importantly, the family members of these patients tested negative for the virus, suggesting that the spread within households was contained. This observation could point to the efficacy of the preventive measure, even though the direct correlation between *Arsenicum album* and the reduction in cases cannot be conclusively established without further research.

Additionally, the reduction in the number of people suffering from influenza-like symptoms—decreasing from 124 to 80—may suggest a positive trend in mitigating symptoms associated with COVID-19 or other respiratory infections. However, it is essential to recognize that the decrease in symptoms could also be attributed to factors such as the natural course of the viral infections or the effect of other preventive measures, such as social distancing, sanitation, and mask usage, which were likely implemented during this period.

Overall, the distribution of *Arsenicum album* in these rural villages during a period of high COVID-19 transmission could have contributed to reducing the number of infections and symptoms, especially in high-risk individuals. However, the limitations of homeopathic medicine, the absence of a control group, and the lack of randomized trials mean that these findings should be interpreted with caution. Further studies with robust methodologies are needed to evaluate the effectiveness of homeopathic treatments like *Arsenicum album* in preventing COVID-19 or alleviating its symptoms.

In conclusion, while the results from the survey and follow-up appear promising, additional scientific studies are required to validate the role of *Arsenicum album* in preventing COVID-19 and managing related symptoms. The findings underscore the importance of comprehensive preventive strategies that include both medical and public health interventions to control the spread of COVID-19, particularly in vulnerable populations. These observations elucidate the specific healthcare vulnerabilities of tribal communities, necessitating targeted interventions to address the multifaceted challenges to comprehensive health across India.<sup>23-27</sup>

## CONCLUSION

The distribution of *Arsenicum album* 30 to a population of 9,586 individuals in five tribal villages of Nashik district during the high-risk period of COVID-19 transmission appears to have shown positive outcomes, particularly in controlling the spread of the virus. While four of the five villages reported no cases of COVID-19 by the end of December 2020, the evidence of *Arsenicum album*'s specific effectiveness remains inconclusive due

to the absence of controlled studies. Additionally, a reduction in influenza-like symptoms and the containment of COVID-19 cases in Mahadeopur suggest a potential benefit, but other public health measures and the natural course of the pandemic may have also contributed to these outcomes. The findings highlight the need for further rigorous scientific studies to assess the efficacy of homeopathic treatments like *Arsenicum album* in the prevention and management of COVID-19.

Ultimately, this study underscores the importance of a multifaceted approach to public health, including preventive treatments, community-based interventions, and adherence to essential health protocols to protect vulnerable populations from the ongoing threat of COVID-19.

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