



## “DOMICILIARY MANAGEMENT FOR CONFIRMED CASES OF COVID-19 IN AMRAVATI TOWN OF MAHARASHTRA, INDIA”

### Community Medicine

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### ABSTRACT

**Background:** The second wave of COVID-19 had devastating impacts across all of India. To ease pressure on hospitals, reduce risks associated with COVID-19 spreading in hospitals. The MoHFW leveraged home-based care guidelines for non-critical COVID-19 cases. Current study was planned to collect evidence on the clinical management of mild COVID-19 at home, feasibility of implementing safe care at home. **Methods:** A prospective, follow-up study was carried out in two private non COVID hospitals following MoHFW guidelines in managing mild/asymptomatic cases of COVID-19. **Results:** Total 131 mild COVID-19 cases were included in the current study. All patients had fever and cough as presenting symptoms. This was followed by majority of patients having throat pain 123(93.9%), loss of appetite in 119(90.8%) and body ache in 118(90.1%). Least appearing symptom was breathlessness in 23(17.6%). In next 4-6 days the persisted symptom was fever in 84.1% patients along with weakness and bodyache in 48.9 % and 45.8 % respectively. After one week patients were relieved of most of the symptoms. **Conclusions:** During second wave of COVID-19, home managed cases had fever and cough as most common presenting symptoms. Persisted symptom on day 4 was fever along with weakness and body ache. After one week patients were relieved of most of the symptoms.

### KEYWORDS

COVID-19, Home care, Asymptomatic, Second wave

### INTRODUCTION

In January 2021, the Indian Government declared that India had beaten the pandemic and began to relax the restrictions and loosen standard public health protocols. As late as March 2021 cases in many parts of the country rose exponentially. In early May 2021, the B.1.617.2 variant of SARS-CoV-2, now known as Delta, was classified as a variant of concern by the WHO. This and other highly transmissible variants were believed to be responsible for accelerating the second COVID-19 wave in India. More transmissible variants have driven the scale and intensity of the second wave in India, while political and social factors have further enabled this surge. The first wave affected India's poor and marginalized more than the middle class and elites. In contrast, the second wave affected everyone, including urban elites. The second wave of COVID-19 had devastating impacts across all of India. This wave was different from the first wave in two ways: firstly, the daily infection rate was significantly higher due to the circulation of more transmissible variants of the virus and increased testing capacity, and secondly, it has overwhelmed the Indian healthcare system as more health workers and infrastructure were needed. The cumulative impact has led to high mortality across the Indian population in addition to the social and economic devastation, more acutely felt by vulnerable and marginalized people. Rural areas were similarly under distress, with a double burden of increasing cases and poor access to health care. Health systems were overwhelmed by COVID-19, making it even more difficult for poor and marginalized people to access care in hospitals and treatment centres.<sup>1</sup>

Most people with COVID-19 experience only mild disease and can be safely cared for at home or in community-based facilities with the right support. Home care advice is limited to care for people with mild infections. While all people, particularly with moderate and severe disease should receive care in hospitals or other specialist healthcare settings.<sup>2</sup>

The high burden of patients implies the need for some home care supported by telemedicine. To ease pressure on hospitals, reduce risks associated with COVID-19 spreading in hospitals and other formal care settings. The MoHFW leveraged home-based care for non-critical COVID-19 cases and provided clear guidelines for providing care at home. On April 2021 Government of India Ministry of Health & Family Welfare released revised guidelines for Home Isolation of mild/asymptomatic COVID-19 cases. The guidelines were supersession to the guidelines issued on the subject on 2nd July, 2020. As per the guidelines, the patients who are clinically assigned to be mild/asymptomatic were recommended for home isolation.<sup>3,4</sup>

### Need for the Study:

Current study was planned to collect evidence on the clinical management of mild COVID-19 cases at home, the feasibility of implementing safe care, including IPC measures, the capacity for communication between home-based caretakers and community health providers, as well as home-based patients' access to health facilities.

### Objectives:

1. To provide comprehensive home management to the confirmed mild cases of covid-19 with supervision.
2. To suggest recommendation based on study findings

### MATERIALS AND METHOD

**Study setting:-** Study was carried out in two private hospitals of Amravati city following COVID-19 MOHFW guidelines

**Study design:-** Prospective, follow-up study

**Sample size and sampling method:-** Sample was based on inclusion-exclusion criteria and study period. Convenience sampling was applied.

**Study period:-** March 2021- June 2021 – 4 months

### Inclusion criteria:-

Mild patients of Covid-19 confirmed by RT-PCR test, with good general condition and having following parameters on day 1-

- B.P. 140/90 mm Hg. ,
- SpO2 above 94%,
- No associated complications and
- Willing for home care and isolation (As per guidelines) with regular follow up.

### Exclusion criteria:-

- Severe Covid-19 cases with complications and requiring hospital based management.
- Covid-19 mild cases on home based care with worsening of symptoms.

### Study protocol:-

Mild Covid-19 cases were registered from two private non-COVID hospital from Amravati city. These hospitals followed the MOHFW guidelines while treating the patients. Patients meeting the inclusion criteria and encountered during study period were included in this study. As per revised guidelines of MoHFW these patients were allowed home isolation.<sup>3</sup> Patients were followed up daily for temperature, vitals and Oxygen saturation (SpO2). Patients with risk

factors for severe illness were monitored closely, given the possible risk of deterioration. With worsening symptoms (such as mental confusion, difficulty breathing, persistent pain or pressure in the chest, bluish coloration of face/lips, dehydration, decreased urine output, etc.), then patients were immediately admitted to a Dedicated Covid Health Centre or Dedicated Covid Hospital. Home care patients received symptomatic treatment such as antipyretic for fever and pain, anti-tussives and bronchodilators for cough, antacids and anti-emetics, vitamin C and zinc, Tab Ivermectin, Tab Doxycycline and Tab. Favipiravir as per MoHFW and local health authority guidelines. Along with treatment adequate nutrition and appropriate hydration was ensured. Patients were provided with dietary and psychological counseling which was done telephonically and at times over videoconferencing. Patients were followed up daily till 8 days. Handouts were also provided to patients and their caretakers on IPC measures and biomedical disposal of waste to be followed at home.<sup>5,6</sup>

### Research tool

All participant were followed as per study protocol. They were enquired about symptoms and co-morbid conditions. Research tool included enlisting symptoms, vital signs including SPO<sub>2</sub> which was enquired daily telephonically and at times over video conferencing also. In patients where the above facilities were unavailable they were called for follow up at study setting health centre.

### Ethical consideration and confidentiality

Institutional ethics committee approval was taken before commencing the study. Data was collected after permission and consent from patients along with willingness of participation in study. Data collected was kept confidential.

### Statistical analysis

Data was entered into MS excel and proportions of study variables were calculated and presented in tabular form.

### Operational definitions

Asymptomatic cases/mild cases of COVID-19:- The asymptomatic cases are laboratory confirmed cases not experiencing any symptoms and having oxygen saturation at room air of more than 94%. Clinically assigned mild cases are patients with upper respiratory tract symptoms (&/or fever) without shortness of breath and having oxygen saturation at room air of more than 94%.<sup>5</sup>

## RESULTS

Total 131 mild COVID-19 cases were included in the current study. Table 1 shows distribution of patients as per study variables, 105 patients were from urban area. Out of 131 patients 76 were males. Majority of patients i.e 58 patients were from 38-57 age group.

**Table 1: Distribution of variables in study participants**

| Study Variables           | Categories | Frequency N= 131 | Percentage |
|---------------------------|------------|------------------|------------|
| Residential Area          | Rural      | 26               | 19.8       |
|                           | Urban      | 105              | 80.2       |
| Gender                    | Male       | 76               | 58.0       |
|                           | Female     | 55               | 42.0       |
| Age categories (in years) | 18-37      | 48               | 36.6       |
|                           | 38-57      | 58               | 44.3       |
|                           | 58-77      | 25               | 19.1       |

**Table 2: Distribution of patients according to co- morbidity**

| Co- morbidity | Yes     | No        | Total |
|---------------|---------|-----------|-------|
| Hypertension  | 10(7.6) | 121(92.4) | 131   |
| Diabetes      | 05(3.8) | 126(96.2) | 131   |

(Figures in parenthesis indicates percentages)

Out of total 131 patients, only 10 had hypertension and 5 were diabetic as depicted in table 2.

**Table 3: Presenting chief complaints**

| Chief Complaints | Yes       | No       | Total    |
|------------------|-----------|----------|----------|
| Fever            | 131(100)  | 00       | 131(100) |
| Cough            | 131(100)  | 00       | 131(100) |
| Throat pain      | 123(93.9) | 08(8.1)  | 131(100) |
| Loss of appetite | 119(90.8) | 12(9.2)  | 131(100) |
| Body ache        | 118(90.1) | 13(9.9)  | 131(100) |
| Weakness         | 112(85.5) | 19(14.5) | 131(100) |
| Loss of taste    | 74(56.5)  | 57(43.5) | 131(100) |

|                          |          |           |          |
|--------------------------|----------|-----------|----------|
| Loss of smell            | 74(56.5) | 57(43.5)  | 131(100) |
| Difficulty in swallowing | 46(35.1) | 85(64.9)  | 131(100) |
| Inability to sleep       | 40(30.5) | 91(69.5)  | 131(100) |
| Headache                 | 31(23.7) | 100(76.3) | 131(100) |
| Nausea                   | 29(22.1) | 102(77.9) | 131(100) |
| Breathlessness           | 23(17.6) | 108(82.4) | 131(100) |

(Figures in parenthesis indicates percentages)

Table 3 depicts distribution of patients according to presenting complaints. All patients had fever and cough as presenting symptoms. This was followed by majority of patients having throat pain in 123(93.9%) patients, loss of appetite in 119(90.8%) patients and body ache in 118(90.1%) patients. Least appearing symptom was breathlessness seen in 23(17.6%) patients.

**Table 4: Chief complaints of patients during first week of illness**

| Chief Complaint          | Duration  |          |                  |
|--------------------------|-----------|----------|------------------|
|                          | < 3 days  | 4-6 days | 7 days and above |
| Fever                    | 131(100)  | 84(84.1) | 6(4.6)           |
| Cough                    | 131(100)  | 39(29.8) | 00               |
| Throat pain              | 123(93.9) | 33(25.2) | 00               |
| Loss of appetite         | 119(90.8) | 36(27.5) | 06(4.6)          |
| Body ache                | 118(90.1) | 60(45.8) | 07(5.3)          |
| Weakness                 | 112(85.5) | 64(48.9) | 05(3.8)          |
| Loss of taste            | 74(56.5)  | 05(3.8)  | 00               |
| Loss of smell            | 74(56.5)  | 06(4.6)  | 00               |
| Difficulty in swallowing | 46(35.1)  | 00       | 00               |
| Inability to sleep       | 40(30.5)  | 00       | 00               |
| Head ache                | 31(23.7)  | 13(9.9)  | 00               |
| Nausea                   | 29(22.1)  | 12(9.2)  | 00               |
| Breathlessness           | 23(17.6)  | 04(3.1)  | 00               |

(Figures in parenthesis indicates percentages)

Table 4 depicts distribution of patients according to complaints over one week duration. The most common complaint during first three day was cough and throat pain along with fever. Loss of taste and loss of smell was found in 52.9 % and 51.9% cases respectively. Inability to sleep was found in 30.5% patients. In next 4-6 days the persisted symptom was fever in 84.1% patients along with weakness and body ache in 48.9 % and 45.8 % respectively. After one week patients were relieved of most symptoms.

## DISCUSSION

Current study showed all patients had fever and cough as presenting symptoms. This was followed by throat pain (93.9 %), loss of appetite (90.8 %) and body ache (90.1%). Least appearing symptom was breathlessness (17.6%).

Study from Bangladesh by Mh. Ali et.al. (2021) showed fever as most common symptom (80.06%), followed by cough (51.53%), altered smell and test (36.81%), Sore throat (32.21%), head ache(19.33%) and breathlessness (18.40%).<sup>7</sup>

Study from Spain by Iftimie S. et.al. (2021) showed predominant symptoms of infection (fever, dyspnea, pneumonia cough) were similar in both waves, although the patients in the second wave presented renal (acute kidney failure) and gastrointestinal symptoms (vomiting, abdominal pain) more frequently.<sup>8</sup>

In our study the most common complaint during first three day was cough and throat pain along with fever. Loss of taste and loss of smell was found in 52.9 % and 51.9% cases respectively. Inability to sleep was found in 30.5% patients. In next 4-6 days the persisted symptom was fever in 84.1% patients along with weakness and body ache in 48.9 % and 45.8 % respectively. After one week patients were relieved of most of the symptoms.

## CONCLUSIONS

All patients had fever and cough as presenting symptoms. This was followed by majority of patients having throat pain, loss of appetite and body ache. Least appearing symptom was breathlessness. The most common complaint during first three day was cough and throat pain along with fever, loss of taste and loss of smell. In next 4-6 days the persisted symptom was fever along with weakness and body ache. After one week patients were relieved of most of the symptoms.

## Recommendations

There is an urgent need to support patients with mild COVID-19 who

can undergo home care safely and scale up telemedicine provided by trained registered medical practitioners. This practice of home treatment with regular follow-up of patients with mild symptoms can be replicated in future COVID-19 wave and can help relieve pressure on health care system.

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