REVIEW ARTICLE

An overview of COVID-19 disease and Lockdown effect in Eastern Uttar Pradesh

Anand Bihari1, Ankit Srivastava2, Syed Neyaz Hasan3, Pragya Singh4

ABSTRACT

Background: On December 31, 2019, the World Health Organization (WHO) was informed of cases of pneumonia of unknown etiology detected in Wuhan City, Hubei Province of China. A novel Coronavirus (2019-nCoV) was identified as the causative virus by Chinese authorities on January 7. Available evidence on the 2019-nCoV virus and previous experience with other Coronavirus (MERS-CoV and SARS-CoV) and other respiratory viruses (e.g., avian influenza) suggests that there was zoonotic transmission associated with the 2019-nCoV. Methods: A Hospital based cross-sectional study was conducted in Government Medical College Azamgarh, Eastern Uttar Pradesh on the subjects confirmed with COVID 19 tests since 24 March 2020 till the submission of this research. Oral consent was taken from all the patients. Results: The males are getting affected more than females and it might be because of frequent travel and smoking and gender also affects number of patients significantly. Study reveals at maximum patients were asymptomatic and effect of lockdown was also noticed. Conclusion: The present study concludes that the patients who showed symptoms were lesser; maximum were presented as sore-throat, cough and fever followed by other minor symptoms. The lockdown has significantly affected the number of patients but how long the country could be closed is challengeable, along with the employment of the underprivileged people.

Keywords: Coronavirus, MERS-CoV, nCoV virus and SARS-CoV

Introduction

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered Coronavirus. Most people infected with the COVID-19 virus experience mild to moderate respiratory illness and recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness1. COVID 19 is more commonly known as Corona virus spread from Wuhan city of China to whole world and become a most common infectious disease leading to a pandemic. This virus belongs to RNA family same as MERS and SARS. The total positive cases till 13th July 2020 are 13 million out of which 7.6 million have recovered and 5.7 Lacs expired worldwide (213 countries). In India, the data is continuously increasing and crossed over 8.7 Lacs; out of those around 49% are active, 36.78 % (5.5 lac) recovered and approximately 2.3 % (more than 23 thousand) died2. In India most of the cases are asymptomatic but they are acting as carrier and transmitting the infection to others which is not good for nation and making the dilemma condition to judge the pandemics in view of its probable duration and severity. The number of patients and Lockdown effects is changing the scenario in a continuum and affecting the harmony in country.

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Received 03.06.2020 Revision 05.06.2020 Accepted 22.06.2020 Published 29.06.2020

Prior Publication: N/A; Source of Funding : N/A; Conflicts of Interest: None
To save nation, Indian Government came into action and given phase wise Lockdown to handle the situation in view of pattern of disease.

**Phase 1 (24 March – 14 April):** On 24th March 2020, The Prime Minister Mr. Narendra Modi announced nation-wide lockdown for 21 days (3 weeks), limiting movement of the entire population as a preventive measure against the COVID-19 pandemic in India. The lockdown was placed when the number of confirmed positive cases was approximately 500. Observers stated that lockdown had reduced the doubling rate of disease growth from 6 days by 24th April to 8 days by 18th April.

**Phase 2 (15 April – 3 May):** On 14th April, the Lockdown was extended till 3 May with a conditional relaxation promised after 20 April for the regions where the spread had been contained by then. Strict monitoring was guided for every police station and every state would be carefully evaluated to see if it had contained the spread. The areas that were able to do so would be released from the lockdown on 20 April. If any new cases emerged in those areas, lockdown could be reimposed. On 16 April, lockdown areas were classified as "red zone", indicating the presence of infection hotspots, "orange zone" indicating some infection, and "green zone" with no infections.

**Phase 3 (4 – 17 May):** On 1st May, the Ministry of Home Affairs (MHA) and the Government of India (GoI) further extended the lockdown period to two weeks beyond 4 May, with some relaxations. The country has been split into 3 zones: red zones (130 districts), orange zones (284 districts) and green zones (319 districts). Red zones were those with high corona virus cases and a high doubling rate, orange zones are those with comparatively fewer cases and green zones are those without any cases in the past 21 days. Normal movement was permitted in green zones with buses limited to 50 percent capacity. Orange zones were allowing only private and hired vehicles but no public transportation. The red zones were remain under lockdown. The zone classification was revised once a week from 4 May 2020; the lockdown was eased with several relaxations in all zones as per Ministry of Home Affairs guidelines.

**Phase 4 (18 May – 31 May):** On 17th May, the National Disaster Management Authority (NDMA) and the Ministry of Home Affairs (MHA) extended the lockdown for a period of two weeks beyond 18 May, with additional relaxations. Unlike the previous extensions, states were given a larger say in the demarcation of Green, Orange and Red zones and the implementation roadmap. Red zones were further divided into containment and buffer zones. The local bodies were given the authority to demarcate containment and buffer zones.

With this all happenings in the country, our institution in eastern Uttar Pradesh was also trying to give its best at each level with all the Government rules and regulations. The present study was planned to give a review of our institution in view of patients in Isolation ward and their clinical presentation. Meanwhile, Government guidelines have been kept on changing so there was much manipulation done at institutional level. Initially there was 20 bedded Isolation ward and 16 bedded patient Quarantine setting. With our continuous efforts on patient care, later the government made it 100 bedded (80 bedded Isolation+20 ICU) then after it was declared as COVID dedicated hospital of 425 bedded which was divided as 397 isolation ward, 20 ICU, 05 Post-operative bed, 02 beds for OT and 01 in labor room and finally 475 bedded which was divided as 380 isolation ward, 70 HDU, 25 ventilator bedded.

**Research question:** Is there any association between age, sex and lockdown effect with number of COVID positive patient?
The specific objectives of the study were:
1. To assess the pattern of COVID-19 patients on the basis of symptoms and asymptomatic perceptions.
2. To assess the socio-economic & demographic characteristics of COVID-19 patients.
3. To analyze the effect of lockdown on number of patients per day.

Materials and Methods

Study design: A Hospital based cross-sectional study was conducted in Government Medical College, Azamgarh, Eastern Uttar Pradesh on the subjects confirmed with COVID 19 tests since 24 March 2020 till the submission of this research.

Oral consent before the enrollment was obtained from all of the participants. Participant information sheet in the local language (Hindi) was given and read out to each study participant before their recruitment.

Data collection: This study was conducted in Government Medical College, Azamgarh on the subjects either suspected or confirmed with Covid 19 tests since 03 April 2020 till the submission of this research.

Statistical analysis: The data was entered in MS Excel and incorporated in SPSS software. The data was analyzed statistically and includes their age, sex, symptoms if any then they are noted as cough, fever, breathing problem, sore throat and abdomen pain.

This study was ethically approved.

Results

The number of patients has also been affected by lockdown phases and unlocking process; there were less patient in first three phases of lockdown and in fourth phase, the interstate migration had enhance the number of patients whereas in June when the unlocking started the number of patients increased (table 1).

The males are getting affected more than females and it might be because of frequent travel and smoking (table 2).

<table>
<thead>
<tr>
<th>Distribution of duration</th>
<th>No. of cases</th>
<th>Per Day Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase-I (24 March - 14 April)</td>
<td>6</td>
<td>0.27</td>
</tr>
<tr>
<td>Phase-II (15 April -3 May)</td>
<td>3</td>
<td>0.67</td>
</tr>
<tr>
<td>Phase-III (04 May -17 May)</td>
<td>8</td>
<td>0.57</td>
</tr>
<tr>
<td>Phase-IV (18 May - 31 May)</td>
<td>39</td>
<td>2.79</td>
</tr>
<tr>
<td>Unlock (01June to 30 June 2020)</td>
<td>106</td>
<td>3.53</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>No.</th>
<th>%</th>
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<tbody>
<tr>
<td>Female</td>
<td>27</td>
<td>16.67</td>
</tr>
<tr>
<td>Male</td>
<td>135</td>
<td>83.33</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The age bar also affected the patient numbers significantly. There was less patient at less 20 years and more 50 years and this might be because of no movement of this age group. Maximum number of patients was found in the age bar of 28-32 years and 49-51 years. There was fluctuation in patient’s number from 33-48 years (figure 1).

In the initial weeks, the number of patients was negligible followed by hike in second month and reached at its peak at the end of second month then gradually it came down and again started growing in week 12 and now its elevating (figure 2).
The maximum number of patients is asymptomatic (59.26%) and only 40.74% are symptomatic (Fig. 3).

It was observed that fever alone or with cough was the most common symptoms followed by sore throat and cough with Sore throat. There were many patients who were having breathing issues (Fig. 4).

**Conclusion**

The present study concludes that the patients who showed symptoms were lesser; maximum were presented as sore-throat, cough and fever followed by other minor symptoms. By analyzing the data it can be noticed that mortality and morbidity is very less in the ratio of population of an area in present situation so if the population cooperates with Government guidelines and health care workers’ instructions, the situation could be controlled. The lockdown has significantly affected the number of patients but how long the country could be closed is challengeable, along with the employment of the underprivileged people. As a new Institution in rural area we have followed all the guidelines and stood at the same platform along with well equipped and multi-specialty hospital in this COVID 19 pandemics which is reflected by it’s up gradation from L1 to L3.
References
