A Contemplate on Epidemic Outbreak of 'SARS COVID-19' in India

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ABSTRACT

Objective: The objective of this article is to give a review on the trend of COVID-19 in India.
Material and methods: This review includes an over-view of the data of the active cases, deaths, and recoveries during COVID-19 pandemic in India and across the globe.
Results: COVID-19 or Corona Virus pandemic affected 213 countries globally. Till now, after approximately 9 months of this deadly virus outbreak (outside India) and around 8 months in India any preventive medicine is still not discovered. There is a strong need for development of vaccine, which may take several months to few years for the development

Key Words: SARS-CoV-2, Respiratory syndrome, Pandemic, Janta Curfew, Lockdown, Containment Zones.

INTRODUCTION

When a new disease emerges, there is the possibility of a pandemic, which is worldwide spread of the disease. There have been multiple pandemic and epidemic outbreaks in recent history, including the 1918 influenza pandemic, the 2003 SARS-CoV outbreak, and most recently, the COVID-19 pandemic. In December 2019, an outbreak of severe acute respiratory syndrome coronavirus 2 infection occurred in Wuhan, Hubei Province, China, and spread across China and beyond. [1] On 30 January 2020, the WHO declared the outbreak of SARS-CoV-2 a Public Health Emergency of International Concern. [1] Globally, approximately 170,000 confirmed cases of coronavirus disease 2019 (COVID-19) caused by the 2019 novel coronavirus (SARS-CoV-2) have been reported, including an estimated 7,000 deaths in approximately 150 countries. [3] SARS-CoV-2 is one of seven types of coronavirus, including the ones that cause severe diseases like Middle East Respiratory Syndrome (MERS) and sudden acute respiratory syndrome (SARS). [4]

Outbreak of COVID-19-

In the 21st century, 2 highly pathogenic HCoVs-severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV)-emerged from animal reservoirs to cause global epidemics with alarming morbidity and mortality. [5] The virus can lead to pneumonia, respiratory failure, septic shock, and death. Many COVID-19 complications may be caused by a condition known as cytokine release syndrome or a cytokine storm. This is when an infection triggers the immune system to flood the bloodstream with inflammatory proteins called cytokines. They can kill tissue and damage the organs. [6] The most common symptoms of COVID-19 is sore throat. Some patients may have aches and pains, nasal congestion, runny

nose, sore throat or diarrhoea. These symptoms are usually mild and begin gradually. [7] COVID-19 is highly contagious in nature, which makes it more lethal and threat for public health.

COVID 19 and INDIA:

As on 24th August 2020, 7,10,771 are actives cases, 2,338,035 are total recoveries in India with 57,542 deaths of Covid-19 infected patients. This data shows 22.88% of total actives cases, 75.27% recovery rate with 1.85% mortality rate. [7] The state wise details are given in the table below:

TABLE 1. [7]

S. No.	Name of State / UT	Total active cases*	Cured *	Deaths **
1.	Andaman and Nicobar Islands	3132	2647	46
2.	Andhra Pradesh	434771	330526	3969
3.	Arunachal Pradesh	4112	2885	7
4.	Assam	109040	85461	306
5.	Bihar	136457	119540	582
6.	Chandigarh	4346	2431	56
7.	Chhattisgarh	31503	16989	277
8.	Dadra and Nagar Haveli and Daman and Diu	2367	2081	2
9.	Delhi	174748	155678	4444
10.	Goa	17418	13577	192
11.	Gujarat	96300	77756	3020
12.	Haryana	64732	52672	689
13.	Himachal Pradesh	6116	4515	38
14.	Jammu and Kashmir	37698	29015	703
15.	Jharkhand	41656	27143	417
16.	Karnataka	342423	249467	5702
17.	Kerala	75385	51538	294
18.	Ladakh	2681	1874	34
19.	Madhya Pradesh	11510	40390	1229
20.	Maharashtra	792541	573559	24583
21.	Manipur	6252	4330	28
22.	Meghalaya	2368	1162	10
23.	Mizoram	1011	591	0
24.	Nagaland	3950	3067	9
25.	Odisha	103536	77286	492
26.	Puducherry	14411	9334	228
27.	Punjab	53992	370207	1453
28.	Rajasthan	81693	66812	1056
29.	Sikkim	1652	1225	3
30.	Tamil Nadu	428041	368141	7322
31.	Telengana	12767	95162	836
32.	Tripura	12153	7674	113
33.	Uttarakhand	19827	13650	269
34.	Uttar Pradesh	230414	172140	3486
35.	West Bengal	162778	134270	3228
	Total #	710771	2338035	57542
	*(Including foreign Nationals)			
	**(more than 70% cases due to comorbidities)			

The south-western state of Maharashtra reported the highest number of active coronavirus (COVID-19) cases in India. Andhra Pradesh and Karnataka followed, with relatively lower casualties. [8] Till now (01stSeptember2020) only Mizoram reported zero death.

Invasion of COVID-19 in India:

India witnessed an outbreak of the coronavirus, otherwise known as COVID-19, or SARS-CoV-2 in late January 2020 when three Indian students travelled to the southern state of Kerala from Wuhan in China - the epicentre of the outbreak. All three tested positive for COVID-19, confirming a local contagion. At the same time, several other cases were detected in other parts of the country, most of which were linked to people with a travel history to affected countries. Infections increased rapidly since March, with a significant growth in testing. [8] Six cities

account for around half of all reported cases in the country – Mumbai, Delhi, Ahmedabad, Chennai, Pune and Kolkata. [9] As of 24th May 2020, Lakshadweep was the only region which has not reported a case.

COVID-19 Timeline in India:

In the start of this global pandemic India reported only one case in January and 2 cases in February, all 3 infected persons returned from china. [10][11] Within 1 month only a rapid increase of COVID-19 infection was reported. On 31 March, a 68-year-old woman from Thiruvananthapuram in kerala [12] and a 65-year-old man from Mohali district in Punjab [13] became the forty-eighth and forty-ninth victims of the virus in the country. With the spread of infection number of deaths increased. By the end of April 2,02,067 deaths & 1823 cases were reported. [14] In India, there have been 1,73,763 cases confirmed, 4,971 people have died, and 82,369 people have recovered from the virus by 30th May 2020. [15]
In July 26,47,663 confirmed cases were reported with 19,19,842 recovered cases and 36,511 total deaths. [16]
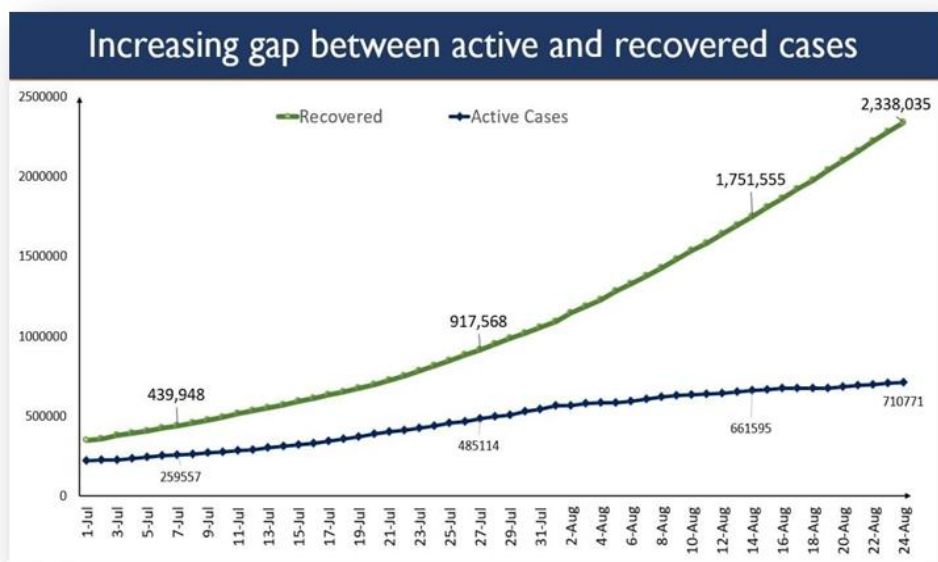

Fig: 01 (Source: Ministry of Health and Family Welfare)

Pandemic lockdown in India:

Seeing the rapidly increasing cases of COVID-19 globally, Government of India decided to restrict the movement of people thus imposing "Janta Curfew" on 22nd march followed by total lockdown for 21 days. The lockdown was placed when the number of confirmed positive coronavirus cases in India was approximately 500. [17] From 20 April, based on extensive scrutiny, a conditional withdrawal of the lockdown was permitted in areas where the spread has either been contained or prevented. [18] Observers stated that the lockdown had slowed the growth rate of the pandemic by 6 April to a rate of doubling every six days, [19] and by 18 April, to a rate of doubling every eight days. [20] The National Disaster Management Authority has issued an order, extending the nationwide lockdown in India till May 31. [21] The last lockdown has been extended to 30 June. All inter-state and intra-state travel restrictions was lifted by 1 June; and malls, restaurants, and religious places will be allowed to open from 8 June in some states. [22]

Table 2:

Phase 1 lockdown- 25th March to 14th April 2020
Towards the end of the initial period, the rate of growth of COVID infections in India had significantly slowed, from a rate of doubling every three days prior to the lockdown to one of doubling every eight days on 18 April. [20]
Phase 2 lockdown- 15th April to 3rd May 2020
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. [23]
Phase 3 lockdown- 4th May to 17th May 2020
Phase 4 Lockdown- 18th May to 31st May 2020
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. [24] [25] [26]

India's Case Fatality Rate (CFR) is maintained below the global average. It is on a continuous positive slide and currently stands at **1.89**%. [27]

As of 1st September 2020, there are 25,298,875 confirmed cases of corona virus including 8,47,602 deaths reported to WHO globally. [28]

Over 1.8 million new COVID-19 cases and 38 000 new deaths were reported to WHO in the week ending 30 August, a 1% increase in the number of cases and 3% decrease in the number of deaths compared to the previous week (17 to 23 August) (Figure 1). A cumulative total of nearly 25 million cases and 800 000 deaths have been reported since the start of the outbreak. [29] It took India just 206 days to cross the 30 lakh-mark. The milestone came just 16 days after the country reported 20 lakh cases, according to data. The Indian Council of Medical Research (ICMR) said India has been testing around 74.7 people per lakh population, much higher than WHO's guidelines of testing 14 people per lakh population. [30]

Unlocking India:

In recent order of MoHFW (Ministry of Health and Family Welfare) National Disaster Management Authority (NDMA) has directed to issue an order to reopen activities in areas outside containment zones up to 30.09.2020.

Permitted Activities:
1. Continue online learning
2. Skill of entrepreneurship permitted in National skill training Institutes, ITI`s, short term training centres registered with NSDC or skill state development Mission or other Ministry of GOI or state govt.
3. Metro rails to operate w.e.f. 07th Sep 2020 in a graded manner as per the SOP of Ministry of Housing and Urban Affairs.
4. Social/sports/cultural/religious/ Political functions with a ceiling of 100 persons permitted w.e.f 21st Sep 2020.
5. Open air theatre permitted w.e.f. 21st Sep 2020.
6. International Air Travel of passenger as permitted by Ministry of Home Affairs.

Restricted Activities:
1. School, college, educational institutes, and coaching institutes to remain closed till 30th Sep 2020.
2. Cinema halls, swimming pools, entertainment parks, theatres and similar places to remain shut.

Lockdown for CONTAINMENT ZONES:
1. Lockdown to remain in force till 30th Sep 2020.
2. Containment Zones to be demarcated by District authorities at micro level.
3. State/ UT govt, not to impose any lockdown outside containment zones without prior consultation with central govt.
4. Strict containment orders to be enforced and only essential activities to be allowed.

CONCLUSION

The world is enveloped in a global health emergency that is exacting enormous

medical and economic tolls upon humanity. The two largest democracies in the world Indian and the United States, are now struggling and failing in the fight against Corona Virus. India currently has the largest number of confirmed cases in the world after United States and Brazil. In March, after the lockdown was imposed, WHO and the United States praised India's response to pandemic as "Comprehensive and Robust", terming the lockdown restrictions as "aggressive but vital" for containing the spread and building necessary healthcare infrastructure. The Indian government argues that lockdown has successfully reduced the spread of the novel corona virus epidemic, while some critics argued that it has miserably failed. The best way to eradicate the spread is to follow the guidelines issued by the government time to time, maintain social distancing and health hygiene. Govt. of India has also integrated the AYUSH systems of medicines which is helping people to fight COVID-19 naturally. India has such potential to overcome the disease by following the safety measures and Indian health care system.

Conflict of Interest: None

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