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Mini Review

Covid 19, Where should we be; An Indian Scenario

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Received: April 15, 2020; **Published:** August 11, 2020

Abstract

Population of India is projected to over 133 million by 2020, the most populous country in the world after China. Towards the late December a cluster of atypical pneumonia reported in Wuhan city of China and the agent identified as SARS CoV type 2. Even though majority of the cases goes asymptomatic, some of them develops atypical pneumonia and requires ventilatory support. Different countries has adapted different strategies for control of COVID19. During a pandemic CFR is used to compare the severity of the disease across regions. The first case of COVID19 in India was reported from Kerala, a Wuhan returned student and another two cases in next few days. As of March 27th, total number of cases in the country is 815 with 17 deaths. India imposed travel restrictions in first place for international travels and later into domestic travels. India needs separate strategies for control of infections. Considering the health care infrastructure in India, explosion of cases will overburden the system and mortality will increase tremendously. Learning from all the preparations other countries have done so far starting from January, we should prepare to avoid a bigger explosion of cases and borrow time for better handling of cases at slow rate. For studying effectiveness of all current drugs, we need more time and hospital beds.

Keywords: *Stroke; Young; COVID-19; Thrombosis; Anticoagulation*

Introduction

Population of India is projected to over 133 million by 2020, the most populous country in the world after China. That being said, it is understood that any epidemic in these countries have the potential to form pandemic very soon. Towards the late December a cluster of atypical pneumonia reported in Wuhan city of China and the agent identified as SARS CoV type 2. In short span of time, cases reported in Thailand, Japan and rest of the world. Even though majority of the cases goes asymptomatic, some of them develops atypical pneumonia and requires ventilatory support. Different countries has adapted different strategies for control of COVID19. During a pandemic CFR is used to compare the severity of the disease across regions. It may vary depending on the climatic conditions, number of testing, health system of the country etc. Here is a comparison of CFR of some of the countries. It is very premature to comment on CFR until pandemic is over and we get an actual picture of cases in each country. Table 1 shows Case fatality rate of India in comparison with other countries.

Country	Total death/Total case	CFR	Doubling time
China	3292/81340	4.04	40 days
Iran	2378/32332	7.35	11 days
Italy	8215/80589	10.19	8 days
S Korea	139/9332	1.48	25 days
United States	1371/92296	1.48	4 days
India	20/815	2.45	5 days

Table 1: *Showing case fatality rate of India in comparison with other countries.*
**As of March 27th 10pm. Source: https://ourworldindata.org [1].*

China declared lockdown of Hubei province on January 23rd, nearly 3 weeks after reporting to WHO about the cluster of cases. There were nearly 30 deaths by then. In Italy the first case was reported by January 31st and a national wide lockdown happened by March 10th. By this time nearly 800 deaths occurred. India declared its locked down by March 24th when there were nearly 10 deaths nationwide.

Chinese approach was based on the breaking the chain of transmission and seems to be appropriate at the moment, as the number of cases has decreased drastically. Country declared a full scale lockdown at Hubei province, which later expanded into other provinces. People were kept at house quarantine and temporary hospitals were established. In contrast United Kingdom adapted an approach based on herd immunity. National wide lockdown or restrictions were not implemented. But the cases are doubling every day. Considering the economic impact of a lockdown approach is not worth the risk related to an otherwise normal flu like infection, according to British bureaucracy. Italy was late to respond to initial rise of cases and mortality rates hit high there. United States is following a wide testing approach and detecting the maximum number of cases, also keeping a lockdown approach. But sooner this lockdown will be revoked considering the bigger economic impact there.

Similar to Italy, South Korea has explosion of cases in the initial phase and they have taken a different approach than Italy. Aggressive testing was the key in infection control strategy of S. Korea. Kits were made available in plenty during the early phase of the outbreak and different methods were adopted for extracting travel history of citizens. For instance, they accessed credit card details and mobile application data to track the travel history and efficiently made digital foot print of citizens.

The first case of COVID19 in India was reported from Kerala, a Wuhan returned student and another two cases in next few days. Contact tracing was done for these cases and home quarantined 3420 cases and over 25 symptomatic cases were kept in isolation wards. Almost 31 days after the first case two more cases reported in Delhi and Telangana on March 2nd. As of March 27th, total number of cases in the country is 815 with 17 deaths. India imposed travel restrictions in first place for international travels and later into domestic travels. Considering the health care infrastructure in India, explosion of cases will overburden the system and mortality will increase tremendously. Figure 1 shows graphical representation of cases in India.

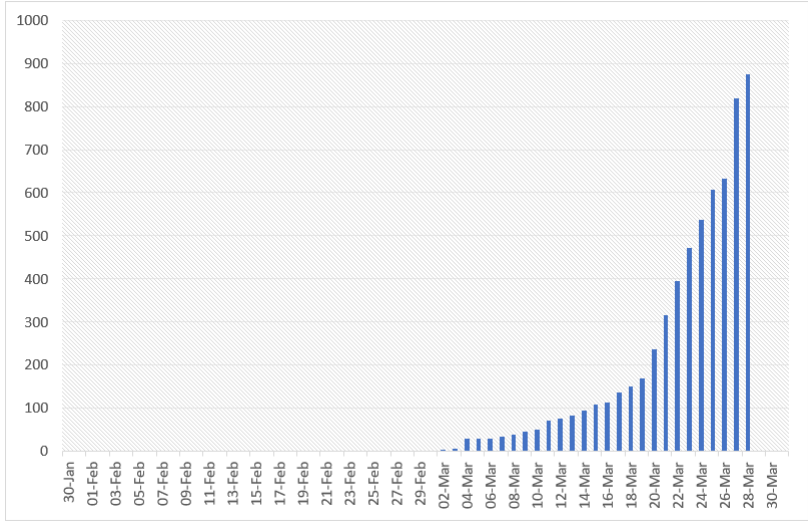

Figure 1: *Graphical representation of cases in India.*
Source: https://www.mohfw.gov.in [2].

Strategies practical in India

- Line listing of all atypical pneumonia cases- since it is clear that testing every suspect cases is not possible at the moment, IDSP line listing of atypical pneumonia cases should be done more aggressively. This will help to estimate the magnitude of missed cases.

- Community surveillance - India has limited resources compared to other developed countries. Testing should be expanded but has a limit. Considering this situation many states like Kerala, Orissa, Punjab has started community survey of symptomatic cases. Identifying any cluster and isolating them is the only solution to the expansion of cases at the moment.

- Certain apex institutes like AIIMS has started Tele medicine consultation for chronic diseases. Majority of chronic disease patients like Diabetes, hypertension etc. can be treated by physicians through tele medicine unit established by the state. Voluntary service of doctors registered in telemedicine database can be used for this purpose. This is will decrease the hospital visits of other patients and decrease the mobility of those with increased risk to COVID19.

- Government of India has developed a new app called Corona Kavach, which is a location based app for tracking people if they are notified areas of infection.

- Meet the shortage of PPE with community groups/prisoners- As a model from Kerala, self-help groups, prisoners and local bodies can help in making PPE for healthcare workers. Rubber board is helping in making N95 masks and gloves and excise board is making hand sanitiser with stock of spirit.

- Voluntary training of youngsters for active surveillance and transport of suspected cases are being done in Kerala. More than 16000 such trained volunteers are already formed for this purpose. A special team consists of one doctor, one ANM and one volunteer will watch a quarantine facility and helps for accessing their daily requirements.

- Currently the testing rate is very low so that isolation cases is practically difficult. Hence more rapid kits with low cost technology should be developed and release in the market at the earliest. Some promising technology has already developed from IIT.

Conclusion

Learning from all the preparations other countries have done so far starting from January, we should prepare to avoid a bigger explosion of cases and borrow time for better handling of cases at slow rate. Many promising treatment options like hydroxy chloroquine with azithromycin, convalescent serum, Anti Retro viral drugs are in the protocol right now. For studying effectiveness of all these drugs, we need more time and hospital beds.

Declaration of Interest

None.

Bibliography

1. www.ourworldindata.org

2. https://www.mohfw.gov.in

Volume 9 Issue 9 September 2020