

Editorial



Novel Corona Virus : New Threat to Mankind

With the end of 2019 & dawn of 2020, a new threat in the form of novel Corona Virus has inflicted upon our World, which has been claiming lives incessantly.

History of viral diseases can be traced to twelve thousand years back. Research on Infectious Disease got momentum after the work of Louis Pasteur on Germ Theory in the 19th Century. After the discovery of Tobacco Mosaic Virus in 1892, at least three lakh viruses has been isolated as a causative agent of diseases in human beings. Lethal viruses are mostly zoonotic, against whom the human beings are least immune to. 20th Century Medical Fraternity concentrated mainly on Bacterial diseases and development of Antibacterial Agents. But from the end of 20th century, there have been a surge of viral diseases with high mortality and morbidity like - Dengue, Ebola, HIV, Zika, Avian Influenza, Corona, etc.

Rapid urbanisation, deforestation along with contact with animals which harbour the different viruses as a reservoir, have resulted in humans being the accidental host of these viruses. Even during evolution, human beings were not exposed to these viruses. So having less immunity and lack of research on antiviral agents have led to multiple viral epidemics all over the world.

Corona virus was first recognised in the mid sixties. Only four strains were identified which caused mild diseases like cough, sore throat, malaise and fever. In 2002, Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV), a new strain of Corona Virus was identified in China which spread to the East Asian countries claiming the lives of nearly 900 individuals. In 2012, Middle East Respiratory Syndrome Coronavirus (MERS-CoV), another new strain of Corona Virus was identified in Saudi Arabia with a higher mortality rate than SARS taking a toll of 750 lives.

In 2019, December, another strain of Corona virus isolated from Wuhan, China. The never before identified strain of Corona virus in man, was named as novel Corona virus (2019-nCoV). The infection caused has now been named as Coronavirus Disease 2019 (COVID-19).

As on 11th February, as per WHO Bulletin, 43,103 confirmed cases (395 cases from outside China) with 1,018 deaths. 24 countries including India has reported confirmed cases of COVID-19. India, till now has reported 3 cases from Kerala, all of whom had travel history from China.

There is controversy regarding source of this new virus which may be animal, snake or bat. Mode of transmission initially thought to be animal to human, but possibly virus is spreading by large droplets, fomites or aerosols. Although the initial presentation is usually with Flu like symptoms, rapid deterioration occurs with development pneumonia and Acute Respiratory Distress Syndrome (ARDS), often resulting in death. Older people, and people with pre-existing medical conditions (such as asthma, diabetes, heart disease) appear to be more vulnerable to becoming severely ill with the virus but the virus has been reported in as early as 30 hour old baby. There is no scientifically proven antiviral drug available till date and only a few sporadic case reports on protease inhibitors has been described. There is urgent need a Randomised Controlled Trial (RCT) or meta analysis to prove the efficacy of these drugs.

Though India till now not affected much, but Indian Government and State and allied health authorities responded in robust manner to contain possible epidemic. Indian citizens in those affected provinces had been brought back to India and health check-up and quarantine done properly. India issued Health advisory on 17th January, 2020. Testing facility was put in NIV, Pune. High alert measures (health cheque up, thermal screening, quarantine etc) taken on all possible import sites. India is taking also leading role to help neighbour countries giving technical assistance to combat the crisis.

The impact of Coronavirus infection in world economy may be more than during SARS. During SARS, China only had share of 4% world economy which has increased to 16% - making it the 2nd largest economy of World. So if China sneezes, world will have cold. China's trading has almost extended all over world. World's leading companies are dependent on Chinese suppliers- whether it may be electronics, automobile, pharmaceuticals, mobile and so on. In 2018-19 India have 14% import from China & 5% export to China. In India one of the major effect may be on pharmaceutical industries. Raw material in this sector usually imported from China. So if this situation continues, there will be deficit in supply chain. So production of medicine in India and pricing may be negatively attached.

One question frequently asked is - whether virus can be transported with Chinese Goods? Although WHO has clearly denied the rumour, the concept may have adverse impact on trading in South East Asia particularly.

Emergence of COVID-19 has raised fear and concern across world. Whether it will emerge as Pandemic like Plague, Influenza or will be endemic like Dengue, Chikungunya is matter of concern. WHO shown knee jerk reaction to declare the epidemic as a Public Health emergency of international Concern on 30th Jan, 2020. This happened just before the Chinese New Year, the time when maximum tourists visit China to celebrate, festival- raising concerns regarding rapid spread the disease across the World.

In one hand discovery of effective drug/vaccine and other hand method to control spread need to be developed at the earliest. Cordon sanitaire in Hubei Province adopted by Chinese Govt may be controversial from Human Rights point of View.

Preventive measures in low income countries and in countries with huge population like India, Brazil is a challenge. So need to understand biology of the virus properly. Government and private agencies should work together and spend more money towards research and it should be transparent and with proper data sharing among all. Identification of the source, mode of transmission, incubation period, host factor, pathogenesis can only help in planning proper prevention and treatment. Otherwise unscientific steps will be taken by a panicked Government that will only create more catastrophe in terms of treatment and Human Rights.

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