

Where We Disappointed Science in COVID - The Indian Story

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Abstract

Corona virus disease-2019 (COVID-19) pandemic has affected lives across the globe with 71,051,805 cases worldwide and 1,608,648 deaths as on December 15, 2020 [1]. Here, we bring forth the unscientific endorsements by the state regarding COVID-19. Government has endorsed drugs without any scientific evidence of efficacy, be it *Remdesivir*, *Tocilizumab*, *Doxycycline ivermectin* combination, and *ritonavir lopinavir* combination which continue to have endorsements by the state till date. There was no public involvement in decision making regarding policies of masking, social distancing and lockdown. Hence public support and adherence to such measures as masks was low in general public. With emergence of new strains and rollout of vaccination, scientific approach to health policy regarding these developments is of paramount importance.

Keywords: COVID-19, Health care workers, Immune boosting agents, Vaccination

Introduction

Corona virus disease-2019 (COVID-19) pandemic has affected lives across the globe with 71,051,805 cases worldwide and 1,608,648 deaths as on December 15, 2020 [1]. Countries across the world opted for various strategies ranging from full lockdown to varying restrictions regarding movement of people, wearing masks, and social distancing. India was one of the few countries to opt for full lockdown at an early stage and post lockdown stage saw increase in number of cases and hospitals got occupied to their full capacity and people looked up to scientists for finding a cure. Here, we list the unscientific practices by the state regarding COVID-19 including endorsement of various drugs without any evidence of efficacy, the emergency use authorization (EUA) of the vaccines without availability of phase 3 data and political mishandling of the pandemic situation.

Irrational Recommendations Regarding Drugs

In March 2020, Indian Council of Medical Research (ICMR), a pivot body of scientific research in India, recommended prophylaxis with hydroxychloroquine (HCQ) for asymptomatic contacts of COVID cases and asymptomatic health care workers (HCWs) [2]. This endorsement by an apex state scientific body was based on very subtle evidence of efficacy and this led to many HCWs using HCQ due to panic created because of high mortalities in Europe in March–April. A case control trial by ICMR concluded that HCWs who had received 4 or more doses of prophylactic HCQ have lesser odds of being infected with COVID-19 and subsequently this study was criticized for its poor design and erroneous interpretations, but no strong anti-advisory was issued regarding this drug despite plethora of evidence regarding its non-efficacy in COVID [3,4]. Likewise, Favipiravir, Lopinavir plus ritonavir combination, and Doxycycline plus Ivermectin combination, were endorsed and are being used, but no well controlled studies support this practice [5]. Remdesivir is an antiviral drug which has shown a decrease in viral load in murine models if used at an earlier stage [6]. But this decrease in viral load has not been reflected as clinical benefit in most of the clinical trials. There was a lot of enthusiasm about this drug at the earlier half of this year based on ACTT 1 trial, But multicentre Solidarity trial suggested that this drug didn't offer survival benefit [4]. Similar is the story for Tocilizumab, interleukin-6 (IL-6) antagonist used in patients of severe COVID which had little evidence of

efficacy at the time of its recommendation and use. In early 2021, with some evidence pouring in for IL-6 antagonists based on REMAP-CAP trial, but no recommendations have been issued on when to use and how to use it to maximize its benefit [7]. Both these drugs are most commonly used agents in severe COVID and state continues to endorse both. Moreover, government recommended traditional immune boosting agents (Ashwagandha, giloy, and chawanprash) for prevention of COVID which took most of the researchers by surprise as there is no scientific data on these traditional medicines [5]. Traditional immune boosting agents lack any scientific evidence of efficacy, no trial has been done and still health department has issued a recommendation regarding these agents.

110% Safe Vaccine vs Water Based Vaccine

World's largest vaccination drive started in India from January 16 [8]. But, instead of allaying the fears of general public with scientific evidence regarding vaccines, EUA was given to vaccines without safety and efficacy data. India's drug regulator has given EUA to two vaccines, Covaxin, a home-made inactivated vaccine; and Covishield, Oxford-AstraZeneca adenovirus vector vaccine, manufactured by Serum Institute of India. The approval of Covaxin baffled many researchers as the approval was given to an incompletely studied vaccine (No phase 3 data) and there were doubts about dosage of Covishield as its trial had unexpectedly shown half dose to be more effective than full dose (90% vs 62%). To add to the confusion, there has been a vaccine war in India between two manufacturers (Bharat Biotech's Covaxin and Serum Institute of India & AstraZeneca's Covishield) with one calling the other a water vaccine and other claiming itself to be a 110% safe vaccine [9]. This eventually resulted in 3/4th of HCWs, who are being vaccinated preferentially in first phase, opted out of receiving vaccine on day one of vaccination. Vaccination doesn't mean 100% safety as efficacy of both these vaccines is less than 70%. Hence, social distancing and masking still remains at centre stage of pandemic control. Still, the practices regarding social distancing, quarantine, and isolation are not based on scientific evidence. It has been shown that no cultivable virus could be found after 10 days in mild COVID but state still recommends for an isolation of 17 days for COVID infection, irrespective of severity of COVID [10]. Unnecessary isolation of an individual leads to economic loss to the person as well as the nation.

Leadership Vacuum

Political will was also lacking in tackling COVID, when political leaders continued holding public meetings defying all norms of social distancing at the peak of pandemic. Intellectual manpower having robust knowledge of basic science and emergency care was not efficiently diverted from non-COVID specialities to COVID care. Everything was done in a typical British bureaucratic manner which we unfortunately inherited from colonial rulers. We happened to be the only country where instead of science; anti-science was endorsed by politico-bureaucracy. The most important factor in controlling any pandemic is community participation in decision making and execution, but the same was lacking in our top down bureaucratic approach leading to miniscule of population wearing masks and practicing social distancing despite few of the states even taking punitive action. The grim situation was given a brighter shade in the name of spreading positivity in public and hence, the emphasis was put on high recovery rate and no one talked of rising new infections and deaths. This is how science was suppressed in public interest, which did not meet public interest. The emergence of newer strains and vaccination of 1.4 billion people are the challenges in front of the government now, which could only be tackled by a scientific approach, which we can only hope that people in power will exhibit.

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