On aerosol transmission of SARS-CoV-2

Dear Editor,

Yadav *et al*.[1] examined epidemiological characteristics, reinfection possibilities, and vaccine development issues of SARS-CoV-2 and submitted a global review in March 2021 edition of the Journal. As the pandemic is continuously changing its shape, our knowledge is updated on a daily basis and this review helps us to enrich our worldview of the viral inflammatory illness.

Under a heading of Introduction, the authors stated that solidarity trial was commenced to gather data on the most successful therapies of COVID-19. Here we want to add that preliminary results of the trial were published at the end of last year. Although several repurposed anti-viral drugs were tested in this group of patients, only Remdesivir was found to improve prognosis and that too in a specific subgroup who were moderately ill and the improvement was detected only on specific parameters. Having viewed the results, the trialists had some complex questions on this large, simple trial.[2] Now it is necessary to search and find answers to this complexity.

Authors compared and contrasted two different viral illnesses under the heading, "Similarities and differences between COVID-19 and influenza." Here they stated droplets, direct contact or indirect contact through fomites as among modes of spread. We want to add aerosol among modes of transmission of the disease in addition.[3] Under a heading of "Transmission of SARS-CoV-2," the authors underscored that 66.7% of air samples from the hallways of the hospital had viral genome. Therefore, the aerosol transmission is the missing link that explains long-range transmission from index case to distantly placed individuals.

Among "Interventions to reduce transmission," the authors emphasized that protection needs to be according to the place of posting in their hospital. However, as several modern-day hospitals have a single building, because of aerosol transmission, *all* the workers are at the risk of getting infected besides those in immediate vicinity serving patients in the COVID-19 ward. Hence, as the most common route of transmission of the virus is inhalation, *all* the workers should be provided with a real N95 mask.[4] A few months ago this journal published an article comparing various masks and lessons learnt there should guide us the way forward.[5] As COVID-19 is a new disease unfolding in our times, we need to learn its mode of transmission by analyzing various case studies. Only then we can widen our paraphernalia to have the best protection guarding ourselves.

The authors conclude by stating that case fatality rate varies from country to country suggesting more to explore on mutations and virulence of the virus strains. However, it is also a function of demography—older individuals experiencing higher mortality and negligible among children; standard of available care—including hospital beds as various countries report a shortage of beds during a sudden surge of cases in their territory; and availability of oxygen and other essential drugs. And there is also an issue of propriety. Presently Governor of New York State in the US is facing an enquiry having been charged with hiding a large number of nursing home deaths.

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Conflicts of interest

There are no conflicts of interest.

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