

Negligible circulation of influenza in COVID times in Northern India

Sir,

After its first appearance in China in December 2019, COVID-19 pandemic has engulfed the whole globe. Concurrent with circulation of the SARS CoV 2 virus, that of influenza virus was reported to be significantly reduced, especially in countries of the Southern hemisphere (SH) which reported virtually no influenza circulation in the peak season of influenza activity.^[1] However, scant data exist from developing countries in South Asia. The first patient with COVID-19 in India was reported on January 30, 2020 and a country-wide lockdown was enforced by the Indian authorities in March 2020 to mitigate the circulation of the virus. We herewith report on influenza circulation in the 2020–2021 season from a temperate region in Northern India where we have earlier demonstrated a Northern hemispherical (NH) seasonality as against a dominant Southern hemispherical (SH) pattern of circulation in the rest of the country.^[2,3] Starting October 2020, 1102 patients (median age 55 years, 665 males), hospitalized for acute respiratory illness were recruited. Nasal and throat swabs were and tested for influenza A and B by the reverse transcription-polymerase chain reaction using standard CDC recommended primer/probes. Further subtyping for positive samples was done into A/H1N1 and A/H3N2 and B/Yamagata and B/Victoria. Patients testing positive for SARS CoV-2 were excluded. Only 3 (0.27%) of the 1102 samples tested positive for influenza (A/H3N2 = 2, B/Yamagata = 1). Fifty-two (4.7%) patients had been vaccinated for influenza.

Our data replicate the circulation of influenza seen in other geographies in the SH temperate region for the 2020 winter and contrasts sharply with the circulation observed in the previous years [Figure 1]. Importantly, the reduced circulation was observed in spite of rather high tourist traffic to the region with tourists from all over the country and outside flocking to Kashmir for the winter months. Adoption of COVID-19 mitigation measures such as use of masks likely contributed to the significant drop in influenza virus circulation as both of the infections are mainly transmitted by respiratory droplets, even as there is an increasing evidence of airborne transmission for SARS CoV 2 viral infection. Influenza viral infection is, however, less infectious than SARS CoV 2. (Ro of 0.28 compared to SARS Co 2 with and Ro of 2-3.5).^[4] Other measures such as closure of schools for most of the year, intermittent lockdowns, and curbs on mass gatherings,

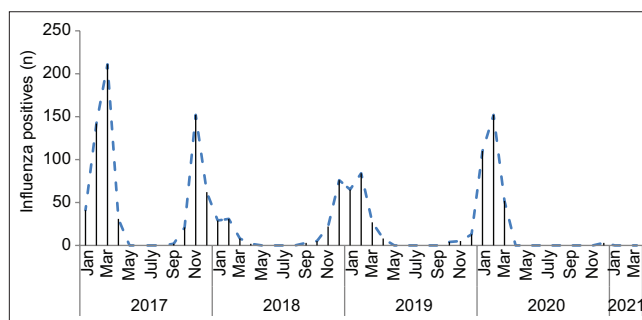


Figure 1: Influenza activity among hospitalized patients in Srinagar, India, between 2017 and 2021

social distancing, etc., also likely contributed to reduced influenza circulation.

Although influenza vaccination is regarded as the most effective means of prevention of influenza and its complications, our data, in tandem with the global decline in influenza virus circulation, argue for routine adoption of measures like social distancing, use of masks and other respiratory etiquettes (covering of cough/sneeze, etc) in future influenza seasons. These measures could also help transmission of other respiratory viruses that cause human disease. Our data also underscore the importance of continued surveillance for circulation of respiratory viruses so as to inform policy.

Financial support and sponsorship

This study was financially supported by Global Influenza Hospital Surveillance Network (GIHSN) of the Foundation for Influenza Epidemiology.

Conflicts of interest

There are no conflicts of interest.

Hyder Mir, Parvaiz A. Koul

Influenza Lab, Department of Internal and Pulmonary Medicine, Sher-i-Kashmir Institute of Medical Sciences, Srinagar, Jammu and Kashmir, India.

E-mail: parvaizk@gmail.com

Submitted: 03-Jun-2021 **Revised:** 05-Jun-2021

Accepted: 06-Jun-2021 **Published:** 17-Jun-2021

REFERENCES

1. Olsen SJ, Azziz-Baumgartner E, Budd AP, Brammer L, Sullivan S, Pineda RF, et al. Decreased influenza activity during the COVID-19 pandemic-United, Australia. *MMWR Morb Mortal Wkly Rep* 2020;69:1305-9
2. Koul PA, Broor S, Saha S, Barnes J, Smith C, Shaw M, et al. Differences in influenza seasonality by latitude, northern India. *Emerg Infect Dis* 2014;20:1723-6.
3. Chadha MS, Potdar VA, Saha S, Koul PA, Broor S, Dar L, et al. Dynamics of influenza seasonality at sub-regional levels in India and implications for vaccination timing. *PLoS One* 2015;10:e0124122.
4. Biggerstaff M, Cauchemez S, Reed C, Gambhir M, Finelli L. Estimates of the reproduction number for seasonal, pandemic, and zoonotic influenza: A systematic review of the literature. *BMC Infect Dis* 2014;14:480.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online

Quick Response Code:



Website:

www.lungindia.com

DOI:

10.4103/lungindia.lungindia_320_21

How to cite this article: Mir H, Koul PA. Negligible circulation of influenza in COVID times in Northern India. *Lung India* 2021;38:401-2.

© 2021 Indian Chest Society | Published by Wolters Kluwer - Medknow