

## Circulation of influenza viruses during the COVID-19 pandemic in the Central Province of Sri Lanka

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**Introduction and Objectives:** Influenza virus is one of the common respiratory viruses infecting humans worldwide. It is a winter virus in the temperate zone and has year-round circulation in tropical countries. The COVID-19 pandemic preventive measures aimed at SARS-CoV-2 may influence the transmission of other respiratory viruses including the influenza viruses. The current study aimed to identify the patterns of other respiratory viruses including influenza viruses during the COVID-19 pandemic as a continuation of the study presented in SSM 2021 (OP 05).

**Methods:** A total of 422 respiratory samples, received by the Virology Laboratory of the National Hospital, Kandy from COVID-19 suspected symptomatic patients were simultaneously tested using real time RT-PCR for SARS-CoV-2, and real time PCR melting curve analysis for other respiratory pathogens including influenza viruses, from 1<sup>st</sup> January to 31<sup>st</sup> December 2021. The demographic and clinical data were acquired from the medical records of the patients.

**Results:** Of the 422 COVID-19 suspected patient samples tested, 8% (32/422) of patients were confirmed to have SARS-CoV-2 infection. Overall detection rate of other respiratory pathogens was 45% (191/422). Of these, influenza viruses were detected in 9% (17/191) of patients. Human rhino/enterovirus, respiratory syncytial virus, human para influenza viruses, human adenovirus, human corona virus-C229E, human corona virus-NL63 and human bocavirus were identified in 23% (43/191), 18% (34/191), 13% (24/191), 7% (13/191), 7% (13/191), 7% (13/191), and 4% (7/191) of patients, respectively. Only a single human metapneumovirus infection was detected during the testing. Respiratory viral co-infections with one or more viruses were detected in 11% (22/191) of patients.

Of the patients infected with influenza viruses (17/191), influenza A and B were noted in 14 (82%), and 3 (18%) patients respectively. Mean age of the patients was 36.73±10.26 years. There were 12 adults (71%) and 5 (19%) children, and 11 males and 6 females. Fever and cough were observed in 16 (91%) patients. Sore throat, shortness of breath, crepitus, rhonchi and dyspnoea were observed in less than 6 (35%) patients. One influenza viral co-infection was noted with SARS-CoV-2.

**Conclusion:** The current findings highlight the importance of diagnosing the other respiratory viruses including influenza during the COVID-19 pandemic, which would help initiate appropriate treatment plans.

**Keywords:** Influenza viruses, COVID-19, Respiratory viruses, Central Province, Sri Lanka

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