Spectrum of respiratory viruses in a sample of adults and children suspected with Severe Acute Respiratory Syndrome Coronavirus-2 infection in the Central Province of Sri Lanka

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Introduction and Objectives: The clinical symptoms of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infections are similar to other respiratory viral infections. Viral aetiological diagnosis during the COVID-19 pandemic is only focused on SARS-CoV-2. Knowing the epidemiological patterns of other respiratory viruses is valuable to improve diagnostic efficacy during the pandemic in patients with acute respiratory tract infection (ARTI) symptoms, especially in low / low middle income countries where viral diagnostic services are limited.

Methods: In an ongoing prospective study, a total of 71 respiratory samples from COVID-19 suspected patients with symptoms of ARTI received by the virology laboratory of National Hospital, Kandy, Sri Lanka from 25th of February to 3rd of May 2021were simultaneously tested using rtRT-PCR for SARS-CoV-2 and PCR melting curve analysis (Real Star, Germany) for 13 other respiratory viruses. The demographic and clinical data wereacquired from medical records.

Results: Only 4% (3/71) patients with suspected COVID-19 were eventually confirmed to have SARS-CoV-2 infection and the overall detection rate of other respiratory viruses was 46% (33/71). Human rhino / enterovirus (44%, 14/33), human parainfluenza virus-3 (21%, 7/33), RSV-A (12%, 4/33) and human parainfluenza virus-1 (9%, 3/33) were more commonly detected. Overall positivity of other respiratory viruses was higher in children (57.6%) than that in adults (42.4%). Onset of clinical symptoms was 2-3 days in 57.6% of patients with virus identified ARTI. Four respiratory viral co-infections were noted including one SARS-CoV-2 and adenovirusco-infection.

Conclusions: The current findings highlight the importance of diagnosing other respiratory viral infections and their clinical impact during the ongoing COVID-19 pandemic. This can initiate appropriate management plans while eliminatingunnecessary patient isolation.

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

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