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

A Shiyamalee1, R Muthugala2, F Noordeen1

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 2021 were 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 were acquired 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 eliminating unnecessary patient isolation.

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

1Department of Microbiology, Faculty of Medicine, University of Peradeniya, Sri Lanka
2National Hospital, Kandy, Sri Lanka

Address for correspondence: Prof F Noordeen. Telephone: +94772293301
Email: faseeha.noordeen12@gmail.com https://orcid.org/0000-0002-2018-0606