Surveillance of Common Respiratory Viruses Including Respiratory Syncytial Virus among COVID-19 Suspected Patients in the Central Province of Sri Lanka

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Acute respiratory tract infections (ARTI) caused by respiratory viruses particularly respiratory syncytial virus (RSV), are an important cause of hospitalization and mortality. During the COVID-19 pandemic, etiological diagnosis was only focused on SARS-CoV-2. This study aimed to assess the prevalence of other respiratory viruses including RSV among COVID-19 suspected patients in the Central Province of Sri Lanka. A total of 608 respiratory samples received to the National Hospital, Kandy, Sri Lanka were tested for respiratory pathogens including RSV from 1st of January 2021 to 31st of October 2022. Among the patients tested 9.4% (57/608) patients with suspected COVID-19 were confirmed to have SARS-CoV-2 infection. The overall detection rate of other respiratory pathogens was 43.5% (296/608). Among the participants, 11.5% were diagnosed with RSV infection. The prevalence rates for other respiratory pathogens were as follows: Rhino/Enterovirus at 13.5%, human coronaviruses (hCoV C229E, NL63, HKU1) at 8.7%, human parainfluenza virus at 6.7%, influenza virus at 6.4%, human bocavirus at 5.9%, human adenovirus at 3.8%, human metapneumovirus at 1.3%, and atypical bacteria at 0.8%. Of the patients infected with RSV, RSV-A, RSV-B subtypes were noted in 55.7% and 8.6% respectively. Mixed infection with subtypes A and B was present in 35.6% patients. Age of the patients ranged from 14 days to 82 years; 87% children and 13% adults were infected with RSV. RSV infected patients had fever, cough, cold and shortness of breath as the predominant symptoms. Sore throat and diarrhea were less common in RSV infected patients. Thirteen RSV co- infections were identified including two with SARS-CoV-2. RSV was the second commonest pathogen identified among COVID-19 suspected patients. This underscores the importance of diagnosing not only suspected viruses but also other respiratory viruses, including RSV. Such comprehensive diagnostics can aid in initiating appropriate management and treatment plans for patients.

Keywords: Respiratory viruses, RSV, Covid-19, Central Province, Sri Lanka