

Viral co-infection with human respiratory syncytial virus in suspected acute and severe respiratory tract infections during COVID-19 pandemic in Yaoundé-Cameroon, 2020-2021

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Abstract

Background: Acute lower respiratory tract infections (ALRI) are one leading cause of morbidity and mortality among people of all ages worldwide, particularly in low- and middle-income countries (LMICs). The purpose of this study was to determine epidemiological characteristics of respiratory viruses in ARI patients during the SARS-CoV-2 pandemic in Yaoundé, Cameroon. **Methods:** Patients were monitored for respiratory symptoms as part of surveillance of SARS-CoV-2 and other respiratory viral infections. Patients of all ages with respiratory symptoms less than 5 days were considered. Sociodemographic and clinical data as well as nasopharyngeal samples was collected from patients. Nasopharyngeal samples were tested for SARS-CoV-2, Influenza and Respiratory Syncytial Virus (RSV) using real-time reverse-transcription polymerase chain reaction methods. Virus distribution and demographic data were analyzed with R version 2.15.1. **Results:** From July 2020 to October 2021, 1120 patients were included. The overall viral detection rate was 32.5%, including 9.5 % for RSV (Respiratory Syncytial Virus), 12.6 % for influenza virus and 12.8 % for SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2). Co-infections were detected in 6.9% of positive cases. While RSV and influenza virus showed seasonal trends, SARS-CoV-2 was detected throughout the study period. **Conclusion:** We found that during SARS-CoV-2 pandemic, respiratory viruses play an important role in aetiology of influenza-like illness in Cameroon, and this observation was true for patients of all ages.

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