

Prevalence of co-infections with respiratory viruses in individuals investigated for SARS-CoV-2 in Ontario, Canada

Adriana Peci¹, Vanessa Tran², Jennifer L Guthrie², Ye Li², Paul Nelson², Kevin Schwartz², Sarah A. Buchan³, and Jonathan Gubbay⁴

¹Ontario Agency For Health Protection and Promotion, Toronto Public Health Laboratory

²Affiliation not available

³Inst Clin Evaluat Sci

⁴Ontario Agency for Health Protection and Promotion, Toronto Public Health Laboratory

November 20, 2020

Abstract

Background: Co-infections of SARS-CoV-2 with respiratory viruses, bacteria and fungi have been reported to cause a wide range of illness. Objectives: We assess the prevalence of co-infection of SARS-CoV-2 with seasonal respiratory viruses, document the respiratory viruses detected among individuals tested for SARS-CoV-2, and describe characteristics of individuals with respiratory virus co-infection detected. Methods: Specimens included in this study were submitted as part of routine clinical testing to Public Health Ontario Laboratory from individuals requiring testing for SARS-CoV-2 and/or seasonal respiratory viruses. Results: Co-infection was detected in a smaller proportion (2.5%) of individuals with laboratory confirmed SARS-CoV-2 than those with seasonal respiratory viruses (4.3%); this difference was not significant. Individuals with any respiratory virus co-infection were more likely to be younger than 65 years of age and male than those with single respiratory virus infection. Those with SARS-CoV-2 co-infection manifested mostly mild respiratory symptoms. Conclusions: Findings of this study may not support routine testing for seasonal respiratory viruses among all individuals tested for SARS-CoV-2, as they were rare during the study period nor associated with severe disease. However, testing for seasonal respiratory viruses should be performed in severely ill individuals, in which detection of other respiratory viruses may assist with patient management.

Hosted file

Adriana_Peci_co-infection_manuscript.pdf available at <https://authorea.com/users/377474/articles/494140-prevalence-of-co-infections-with-respiratory-viruses-in-individuals-investigated-for-sars-cov-2-in-ontario-canada>

Hosted file

Adriana_Peci_Figure 1.pdf available at <https://authorea.com/users/377474/articles/494140-prevalence-of-co-infections-with-respiratory-viruses-in-individuals-investigated-for-sars-cov-2-in-ontario-canada>

Hosted file

Adriana_Peci_Figure_2.pdf available at <https://authorea.com/users/377474/articles/494140-prevalence-of-co-infections-with-respiratory-viruses-in-individuals-investigated-for-sars-cov-2-in-ontario-canada>

Hosted file

Adriana_Peci_Table_1 & 2.pdf available at <https://authorea.com/users/377474/articles/494140-prevalence-of-co-infections-with-respiratory-viruses-in-individuals-investigated-for-sars-cov-2-in-ontario-canada>

Hosted file

Adriana_Peci_Table_3.pdf available at <https://authorea.com/users/377474/articles/494140-prevalence-of-co-infections-with-respiratory-viruses-in-individuals-investigated-for-sars-cov-2-in-ontario-canada>

Hosted file

Adriana_Peci_Table_4.pdf available at <https://authorea.com/users/377474/articles/494140-prevalence-of-co-infections-with-respiratory-viruses-in-individuals-investigated-for-sars-cov-2-in-ontario-canada>