

Epidemiology, disease severity and outcome of SARS-CoV-2 and influenza viruses co infection seen at Egypt Integrated Acute Respiratory Infections surveillance, 2020-2022.

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Abstract

Background: Co-circulation of influenza and SARS-CoV-2 (SARS-CoV-2/Flu) represent public health concern as it may worsen the severity and increase fatality from COVID-19. An increase in number of patients with coinfection was recently reported. We studied epidemiology, severity, and outcome of SARS-CoV-2/Flu coinfections seen at Egypt acute respiratory (ARI) surveillance eight hospitals to better describe disease impact and guide effective preventive measures. Methods: Every fifth patient admitted and first two outpatients seen daily with ARI are enrolled. Standardized questionnaire is used to interview patients who provide nasopharyngeal swabs to be tested weekly at the central laboratory for SARS-CoV-2 and influenza by RT-PCR. Data of all patients with coinfection extracted from surveillance database and descriptive analysis performed for demographics, clinical course, and outcome. Results: Of 18,160 patients enrolled January 2020-April 2022, 6,453(35.5%) were positive for viruses including 52(0.8%) coinfection. Of them 36(69.2%) coinfecting with FluA/H3, 9(17.3%) Flu-B and 7(13.5%) FluA/H1. Patients' mean age was 33.2±21, and 55.8% were males, 20(38.5%) hospitalized, mean hospital days (6.7±6). At hospital 14(70.0%) developed pneumonia, 6(30.0%) ICU admitted, and 4(20.0%) died. Hospitalization rate among coinfection with Flu-B and FluA/H3 was (55.6 and 41.7%), mean hospital days (8.0±6 and 6.4±6), pneumonia (40.0 and 80.0%), ICU admission (40.0 and 26.7%), and death (20.0% for both), while no patients hospitalized with A/H1. Conclusions: An increasing number of SARS-CoV-2/Flu coinfection identified in Egypt with severe course and high fatality. Patients coinfecting with Flu-B and FluA/H3 had severe disease than A/H1. Monitoring disease severity and impact is required to guide preventive strategy.

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Coinfection 50 patients 27.5.2022 ISIRV.docx available at <https://authorea.com/users/485603/articles/570910-epidemiology-disease-severity-and-outcome-of-sars-cov-2-and-influenza-viruses-co-infection-seen-at-egypt-integrated-acute-respiratory-infections-surveillance-2020-2022>