Distribution and Clinical Profiles of Influenza Viral Infection in Hospitalized Children with Acute Respiratory Tract Infections in General Hospital Kegalle, Sri Lanka

R. A. M. Rafeek[1*], M. V. M. Divarathna[1], A. J. Morel[2], A. M. S. B. Abeykoon[1], F. Noordeen[1]

[1]Department of Microbiology, Faculty of Medicine, University of Peradeniya, Sri Lanka
[2]General Hospital, Kegalle, Sri Lanka
** rukshanrafeek@gmail.com*

Influenza is an important cause of acute respiratory tract infection (ARTI), hospitalization, and mortality in children. This study aimed to describe the clinical and epidemiological patterns of influenza infections in children. In this cross-sectional study, nasopharyngeal aspirates (NPA) of children admitted to General Hospital Kegalle with ARTI from May 2016 to July 2018 were tested for influenza A and B using a commercially available direct immunofluorescence assay (IFA) and subtyped (Inf-A H1N1, Inf-A H3N2 and Inf-A H1N1pdm09) using a multiplex RT-PCR. Clinical data were obtained from bed head tickets (BHTs) and questionnaire provided. Influenza viruses (Inf-V) were identified in 10.75% (54/502) of children, of whom 5.57% (28/502) were positive for influenza A (Inf-A) and 5.17% (26/502) were positive for influenza B (Inf-B). Of the 28 Inf-A positive children, 15 were males and 13 were females. Of the 26 Inf-B positive children, 15 were males and 11 were females. Inf-A & B cases were predominantly (46/54) detected in 6 to 20-month-old children. Of the 28 children infected with Inf-A, 11 were diagnosed with nonspecific lower respiratory tract infection (LRTI), 15 had bronchiolitis and 2 had bronchopneumonia. Of the 26 infected with Inf-B, 18 were diagnosed with bronchiolitis, 4 had nonspecific LRTI and 4 had bronchopneumonia. Inf-A circulated throughout the year with a major peak in March 2017. Inf-B circulated throughout the year with a few peaks - one in June and August and from November to December in 2016 and in April 2017. More boys were admitted with ARTI (304/502) compared to girls and viral infection (Respiratory syncytial virus, Parainfluenza virus and Adeno virus) is high among children aged less than 20 months. Majority of children with ARTI infected with influenza were diagnosed with nonspecific LRTI and mild to moderate bronchiolitis. Influenza infections were prevailed throughout the year in the study area of Sri Lanka with variations in the type of the circulating virus

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