

**DETECTION OF HUMAN
METAPNEUMOVIRUS IN ACUTE RESPIRATORY
TRACT INFECTION IN CHILDREN FROM SELECTED
AREAS OF SRI LANKA**

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Humanmetapneumo virus (hMPV) was discovered in 2001 in Netherlands in children suffering from acute respiratory tract infections (ARTI). hMPV belongs to the family of *paramyxoviridae* viruses and is commonly seen in children under the age of five and in older people with compromised immune systems. The clinical symptoms of the disease vary from mild symptoms such as cough, sneezing, runny nose, nasal congestion and fever to more severe symptoms such as wheezing, difficulty in breathing, hoarseness and bronchopneumonia. hMPV is common during the dry season in the tropical countries.

hMPV has been reported from many countries in the world. The virus has a higher prevalence in neighboring countries such as India and Bangladesh, thus the current study was carried out to determine the hMPV infection in children with ARTI from the selected areas of Sri Lanka. The study population selected was children (< 2 years) clinically diagnosed with lower respiratory tract infections. Nasopharyngeal aspirates (NPA) were collected from them from two hospitals (Gampola and Anuradhapura) for a period of one year from 2013-2014. The NPA samples were screened and then typed for seven respiratory viruses (respiratory syncytial virus, adenovirus, influenza A virus, influenza B virus and parainfluenza virus) by indirect and direct immunofluorescence assay (IFA), respectively for an ongoing respiratory project.

In order to determine hMPV's role as a primary pathogen, the negative NPA screened via IFA were selected. To determine hMPV's role as a co-infecting agent with respiratory syncytial virus (RSV), RSV positive NPA were selected. The testing method used for the detection of hMPV was a reverse transcriptase polymerase chain reaction (RT-PCR) using the L gene primers. Altogether 125 samples, selected as mentioned above, were screened for hMPV. Four percentage (4%) of the NPA that were negative for 7 respiratory viruses were positive for hMPV. Four percentage (4%) of the NPA that were positive for RSV were also positive for hMPV. The children detected with hMPV were clinically diagnosed with bronchopneumonia and were residents of both rural and urban areas of the study regions.