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Abstract

Human metapneumovirus (hMPV), a newly discovered paramyxovirus is found to be an important pathogen, which causes a spectrum of respiratory tract infections, ranging from mild upper respiratory infection to severe bronchiolitis and pneumonia in all age groups. Important questions remain on the contribution of hMPV to acute respiratory tract infections and its impact on public health. To date isolation/detection attempts have not been made in Sri Lanka for this newly discovered virus. Therefore we decided to determine whether hMPV was circulating in our community and also the role of hMPV in respiratory tract infections in Sri Lanka. During the period starting from June to October 2004 we conducted a study by collecting nasopharyngeal aspirate (NPA) samples at Outpatient Department, Teaching Hospital Ragama to determine the prevalence of this new virus in the country.

Objectives

1. To determine whether hMPV is a etiological agent of acute respiratory tract infections in Sri Lanka
2. To determine the role of hMPV in the acute respiratory tract infections in Sri Lanka.

3. To determine the prevalence of Influenza- A viruses among patients with acute respiratory tract infection (ARTIs) .

Method. One hundred ($n=100$) nasopharyngeal aspirate (NPA) samples were obtained from patients who sought treatment for acute respiratory symptoms at out patient department, Teaching Hospital, Ragama. NPA samples were placed in viral transport medium (VTM) and transported in ice and stored at -70°C . RNA was extracted using QIAmp viral RNA mini kit (QIAGEN). RNA extracts were tested for hMPV by amplifying M gene by Reverse Transcriptase (RT) Nested – polymerase chain reaction (PCR). Study was further extended by amplifying matrix gene of the Influenza A virus by RT-PCR to determine the prevalence of Influenza- A viruses among patients with acute respiratory tract infection (ARTIs) .

Results. Of the 100 samples tested, non-had evidence of hMPV infection. On the other hand, M gene for influenza A was identified in 21/100 (21.0%) patients.

Conclusions. hMPV was not isolated from the 100 NPA samples obtained from patients presented with four days history of ARTIs. Additional studies are required to determine the role of hMPV in Sri Lanka. However, Influenza-A virus appears to play a role in ARTIs in Sri Lanka