

ENTEROVIRUS 68 IN CUBAN PATIENTS WITH ACUTE RESPIRATORY TRACT INFECTIONS FROM JANUARY 2014 TO DECEMBER 2016

Mayra Mune¹, Alexander Pinon³, Belsy Acosta¹, Odalys Valdes² Amely Arencibia¹, Guelsys Gonzalez² Suset Oropesa¹, Javier Martinez¹ Grehete Gonzalez², Rosmery Roque² and Barbara Hernandez¹

¹National Influenza Center, Cuba

²National Reference Laboratory of Respiratory Virus, Cuba

³University of Miami Miller School of Medicine, USA

Enterovirus 68 (EVD-68) is a rare enterovirus associated with respiratory illness and unlike other enteroviruses, it has been identified only from respiratory specimens. The first enterovirus was isolated from hospitalized samples with lower respiratory infection in California in 1962. Since then, EVD-68 has been identified sporadically from respiratory specimen. In the present work we studied all the clinical samples received at the National Reference Laboratory of Influenza and other respiratory virus during January 2014 - December 2016. We studied 11,129 clinical samples (nasopharyngeal swaps, bronchoalveolar lavage fluids and lung tissues) Molecular diagnosis of enterovirus respiratory virus was performed using Multiplex RT- PCRs. RNA was extracted from clinical specimens by using the QIAamp Viral RNA Mini Kit (Qiagen) according to the manufacturer's instructions, then Mutiplex RT- nested PCRs assay was used for the detection of enterovirus viral RNA using primers and probes that amplified a VP1-VP2 proteins previously reported. For the detection of EV-D68 from the positive enterovirus samples a real time RT-PCR using primers and probe previously reported was performed (CDC,2014) 258 clinical samples were positive to enterovirus by RT-PCR, from them 94 samples were positive to EV-D68 mainly affecting children between 0-4 years old. All the patients we identified had severe illness. The main clinical manifestations were acute respiratory tract infections (RTIs) in lower respiratory tract (bronchiolitis, pneumonia and broncopneumonia). Our results show the potential role of EV68 infection in infants and children with RTIs. Our study suggests that EV68 may be a possible causative agent of severe respiratory illnesses. Clinicians should be aware of EV68 as one of many possible causes of viral respiratory disease. Some diagnostic tests might not detect EV68 or might misidentify it as a human rhinovirus.

mayra231m@gmail.com