

## **Molecular detection of human adenovirus among hospitalized patients with lower respiratory tract infection in Hospital Sungai Buloh, Malaysia**

### **ABSTRACT**

Human adenovirus (HAdV) is one of the common pathogens that are responsible for a wide variety of infectious diseases. There are about 54 different adenovirus serotypes that are responsible for respiratory infections in humans. The prevalence of lower respiratory tract infection (LRTI) – associated with HAdV varies throughout different regions. The prevalence of HAdV in Malaysia is rarely investigated and reported despite severity of infection worldwide. This study was undertaken to identify the HAdV types associated with lower respiratory tract infection (LRTI) in Hospital Sungai Buloh, Malaysia between April 2013 until January 2014, a total of 210 specimens were collected from patients hospitalized with LRTI. Human adenovirus was detected using polymerase chain reaction (PCR). The positive products were sequenced and phylogenetic analysis of the virus was performed. Eighteen of 210 specimens (8.57%) were positive with HAdV infection. Based on the phylogenetic analysis study, HAdV-7 strains were the most common serotype with 11 cases, followed by HAdV-1, HAdV-2 and HAdV-4 with 2 cases each and one case of HAdV-5. The HAdV strains in this study were closely related to strains in Singapore and India. In this study, HAdV infection from LRTI patients in Hospital Sungai Buloh Malaysia were caused by different types of adenovirus mainly HAdV-7. This study will become a reference for further epidemiological study in this country.

**Keyword:** Human adenovirus; Lower respiratory tract infection; Malaysia; Infectious diseases