HUMAN BOCAVIRUS AND AIRWAY HYPERRESPONSIVENESS IN YOUNG CHILDREN WITH LOWER RESPIRATORY TRACT INFECTION (LRI)

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Background and aims: Human bocavirus is a new virus that can cause acute wheezing in young children. This study is aimed to assess the incidence of human bocavirus- LRI in children younger than 5 years old and the correlation between human bocavirus and airway hyperresponsiveness.

Methods: Children younger than 5 years old admitted to the hospital during February 1, 2007 through September 30, 2008 due to LRI were studied. These patients were evaluated for the clinical presentations and their nasopharyngeal aspirates were examined by Polymerase Chain Reaction (RT-PCR) for viruses. Children who had positive PCR for human bocavirus were followed up their clinical and pulmonary function test for 1 year to evaluate the correlation between human bocavirus and airway hyperresponsiveness.

Results: 100 hospitalized children with LRI were enrolled during October1, 2007 through September 30, 2008. Human bocavirus was detected in 6 (6%) children with 46.7% co-infection, ranking forth in incidence behind RSV, rhinovirus and parainfluenza virus respectively. During the study period, 15 children with human bocavirus-LRI were studied. The male: female ratio was 4:1 with the mean age of 22 months. Rhonchi and wheezing were found in 73% of cases and 37% of them response well to bronchodilator. Pulmonary function test were normal in all cases. Twenty-five percent of the patients developed recurrent wheezing during 1 year of follow-up.

Conclusions: Human bocavirus is one of the significant causes of morbidity leading to hospitalization in young children with LRI. The correlation between human bocavirus-LRI and airway hyperresponsiveness should be further studied.