

# Clinical Manifestations of Pediatric Adenoviral Infection during 2010~2014

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## Background/Objective

Human adenovirus (HAdV) is one of the most common causes of respiratory tract infections in children. The clinical manifestations varied from respiratory and gastrointestinal infection to disseminated infection. In Taiwan, adenovirus infection is noted year round with sporadic outbreaks. In this study, we analyzed the clinical manifestations of HAdV infection in children and associated risk factors for hospitalizations.

## Method

Patients with HAdV infection at National Cheng Kung University Hospital from Jan. 2010 to Dec. 2014 were enrolled. HAdV infection was defined by isolation of adenovirus from throat swabs/nasopharyngeal aspirates, or positive for HAdV antigen test or polymerase chain reaction (PCR). Demographic data, clinical manifestations, outcome and deposition were analyzed retrospectively.

## Result

Totally, 1797 cases (1018 males and 779 females) were enrolled with a median age of 4 years. The clinical manifestations include fever (100%), injected throat (91.0 %), cough (72.0 %), rhinorrhea (62.2 %), vomiting (28.6 %), diarrhea (20.0 %), abdominal pain (16.4 %). Upper respiratory tract infections (acute pharyngitis/tonsillitis or pharyngoconjunctival fever) is the most common clinical diagnosis (71.4 %), whereas 25.5% of patients complicated with lower respiratory tract infections. Totally 584 (32.5 %) cases were hospitalized and 37 of them received intensive care. Gastrointestinal manifestation is more common in hospitalized patients than non-hospitalized patients (37.0 % vs. 24.5 %,  $P < 0.05$ ). Hospitalized patient tended to have more underlying disease (26.5 % vs. 6.8 %), more co-infection (11.3 % vs. 3.3 %), more lower respiratory tract complications (46.7 % vs. 15.3 %), longer febrile days ( $5.3 \pm 4.5$  vs.  $2.9 \pm 2.7$  days), and higher C-reactive protein level ( $44.9 \pm 60.0$  vs.  $14.4 \pm 28.7$  mg/L) compared with non-hospitalized patients ( $P < 0.05$ ).

## Conclusion

Although HAdV usually cause mild upper respiratory tract infections in children, patients with underlying disease, co-infection and lower respiratory tract complication have higher risk for hospitalization.