

A Serotype Analysis of Individual Cases of Severe Enterovirus in Taiwan Region, 1998~2006

Tsuey-Li Lin¹, Kow-Tong Chen², En-Tzu Wang³, Yi-Syue Li¹,
Chaio-Wei Huang¹, Chiu-Chu Hsu¹, Ho-Sheng Wu¹

1. Research and Diagnostic Center, Taiwan CDC; 2. Institute of Public Health, National Cheng Kung University; 3. Second Division, Taiwan CDC

Abstract: from Chinese version, pp,514-530

Since Taiwan is geographically located in the subtropical climate region, it seems to be affected by some types of enterovirus every year. Depending on the circulating serotypes of enterovirus at the time, some individual cases of enterovirus infection would develop more severe clinical symptoms due to the set-in of complications. Through a combination of positive clinical diagnosis and further substantiation with laboratory test data, these patients are classified as “confirmed severe enterovirus individual cases.” During the time period of 1998~2006, the most prominent serotypes circulating in Taiwan were Enterovirus 71 (EV71) and Coxsackievirus B3 (CB3). According to the data in our pathogen surveillance system provided by contract laboratories across the island, EV71 had circulated in an endemic fashion in Taiwan over the nine-year period and was always the primary causing agent of confirmed severe enterovirus individual cases, regardless of whether it was the most prominent circulating serotype in a particular year. The other prominent serotype happened to be CB3, which was rather prevalent in 1999 and 2000, and resurfaced in 2005 to become the most prevalent serotype in Taiwan

Received: March 15, 2007; Accepted: June 15, 2007.

Correspondence author: Tsuey-Li Lin; Address: No.161, Kun-Yang Street, Taipei, Taiwan, R.O.C.

E-mail: tllin@cdc.gov.tw

region in that year. Chronologically speaking, this serotype appeared to be a recurrent type, i.e. it phased in and out periodically. Not only do these two serotypes vary from each other in their trends of prevalence, but they also are different in the major age groups of their patients, their clinical symptoms, and some characteristics in their molecular epidemiology. Even the scales or extents of their outbreaks are not quite the same. It is hoped that the observation results described in this article may be useful in the formulation of prevention and control strategies to minimize the impact of future enterovirus outbreaks. These results can be utilized to facilitate quick detection of the responsible pathogen based on certain clinical symptoms and help raise an early alarm that might in turn decrease or slow down the impact of enterovirus outbreaks, particularly those ones caused by these the two serotypes under analysis.

Key Words: Enterovirus 71, Coxsackievirus B3, endemic, recurrence