

# Epidemiological Surveillance of Hand, Foot and Mouth Disease in Shanghai, 2010-2014

Yanling Ge<sup>1\*</sup>, Mei Zeng<sup>1</sup>

<sup>1</sup> Department of infectious disease of Children's Hospital, Fudan University, Shanghai, China

## Background/Objective

To understand the epidemiological characteristics of hand, foot, and mouth disease (HFMD) and prevalent enteroviruses causing the outbreaks of HFMD in Shanghai from 2010 to 2014.

## Method

We did a descriptive analysis of HFMD epidemiology based on the demographic data, seasonal distribution, and enterovirus typing in the community and hospitalized HFMD cases in Shanghai in 2010-2014.

## Result

From 2010 to 2014, the reported HFMD cases were 41080, 37323, 51172, 42198, and 65018, respectively; the severe cases (case-severity ratio) were 469 (1.14%), 456 (1.22%), 318 (0.62%), 104 (0.25%) and 248 (0.38%), respectively. Based on Shanghai census data by the end of 2010, the attack rates of HFMD in Shanghai were 1.62~2.82 per 1000 in the entire population, 40.07~66.54 per 1000 in children < 5 years of age. In terms of proportion of HFMD cases and severe cases in the specific population, male accounted for 59.62%~61.48% and 62.26% ~73.77%, migrant population accounted for 51.86%~62.40% and 72.01% ~ 80.38%, children <5 years of age accounted for 81.18%~86.08% and 90.73%~94.89%; children aged 1-1.9 years comprised the highest proportion in the 22.70%~27.00% and 32.08%~36.40%. HFMD peaked from April to July, in parallel with the peak prevalence of EV71. All the critically severe and fatal cases were caused by enterovirus 71 (EV71). The detection rates of EV71 and Coxsackievirus A16 (CA16) were 73.08%~88.09% and 1.12%~2.90% in severe HFMD cases, 19.64%~48.74% and 2.02%~23.69% in uncomplicated inpatients, and 16.78%~40.08% and 8.36%~33.39% in mild community cases, respectively.

## Conclusion

The persistent of HFMD outbreaks occurred in Shanghai during 2010-2014. Children below 5 years of age, migrant population and male were the major susceptible population. The major peak season of HFMD usually overlapped with the peak of EV71 circulation and the majority of severe HFMD cases were associated with EV71 infection. The effective multivalent vaccine against HFMD is needed to develop