

ing G12P[8] genotype transmission. Moreover, this event occurred right before the beginning of the RVA seasonality in the country. Worldwide, the emergence of genotype G12P[8] as an epidemiologically important strain could raise new concerns for RVA vaccine development. However, despite the possible emergence of new strains, vaccination has been shown to reduce the disease incidence of RVA infection and remain below pre-vaccination levels. Continued surveillance is needed to verify the effectiveness of the Rotarix™ vaccine in Brazil together with potential emergence of unusual genotypes.

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Hospital-based surveillance of enterovirus 71 in HCM City, Vietnam, 2011–2014



S.-T. Luo^{1,*}, W.-Y. Chung², L.N.T. Nhan³, L.B. Lien³, T.H. Khanh³, T.N.H. Dan³, L.P.K. Thoa⁴, N.T. Hung³, P.-S. Chiang⁵, I.-J. Su⁶, M.-S. Lee¹

¹ National Health Research Institute, Zhunan, Taiwan, R.O.C

² National Health Research Institutes, Miaoli County, Taiwan, R.O.C.

³ Children's Hospital No. 1, Ho Chi Minh, Viet Nam

⁴ Children's Hospital 1, Ho Chi Minh City, Viet Nam

⁵ National Health Research Institutes, Miaoli County, Taiwan, R.O.C

⁶ National Health Research Institutes, Miaoli, Taiwan, R.O.C

Background: Human enteroviruses are classified into four species (A, B, C and D) and include over 100 serotypes. Since 1997, Enterovirus 71 (EV71) usually causes self-limited infections with non-specific symptoms and manifests hand-foot-mouth disease (HFMD) or herpangina in children. EV71 have caused severe life-threatening outbreaks in young children in Asian. EV71 circulation among Vietnamese children was first documented in 2005.

Methods & Materials: In 2011, there is a big outbreak of EV71 in Vietnam with more than 5,000 inpatients in Children Hospital No.1 (CH1), and 32 fetal cases. National Health Research Institutes cooperates with CH1 to establish hospital-based surveillance of enterovirus in HCM City in 2011. Children <10 years of age who develop HFMD and were admitted to HCM CH1 were collected throat swabs and sera. Throat swabs were used for virus isolation and Sera were used to measure neutralizing antibody against EV71 in Taiwan NHRI.

Results: Enterovirus isolate rate with HFMD-related inpatients including 38.9% (21/54) in 2011, 19.3% (79/409) in 2012, 42.0% (173/412) in 2013 and 12% (12/100) on June, 2014. Among them, EV71 positive rate from 2011 to June, 2014 were 29.6%, 6.8%, 16.0% and 5%, respectively. The age-specific seropositive rates increase from 15.2% at <0.5 years of age to 17.2, 24.0, 29.4, 58.6, 62.3, 66.1, 77.6% at 0.5–0.9, 1–1.9, 2–2.9, 3–3.9, 4–4.9, 5–5.9 and 6–6.9 years of age, respectively.

Conclusion: The predominant genotype shifted from C4 in 2011 to B5 in 2013. Risk of EV71 infections in Vietnam increased after 6 months of age. Vietnamese children in HCM City acquired EV71 infections at early age and vaccine development in Vietnam should target young children.

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