

O146

2-hour Oral Session

Emerging viruses: what about "Tick", "Chik" and "Zik"?

### Emerging Zika fever outbreak among healthcare workers in a general hospital in the central region of Thailand, January 2015

Rome Buathong\*<sup>1</sup>, Hataya Kanjanasombut<sup>1</sup>, Orathai Suwanchairob<sup>1</sup>, Sirirat Likanonsakul<sup>2</sup>

<sup>1</sup>*Bureau of Epidemiology, Department of Disease Control, Meuang Nonthaburi, Thailand*

<sup>2</sup>*Bamrasnaradura Infectious Diseases Institute, Department of Disease Control, Meuang Nonthaburi, Thailand*

**Background:** Zika fever, mosquito-borne, was confirmed in May 2013 in a Canadian traveler returning from Thailand. A retrospective investigation of fever with rash cases in Thailand was therefore undertaken to assess for possible Zika virus infections on September 2013. Zika fever was detected and spread throughout the country since 2012. On January 2014, we were notified of fever with rash cluster among the health care workers in a hospital near Bangkok. We started outbreak investigation to confirm diagnosis, to describe epidemiological characteristics and to implement control the outbreak.

**Material/methods:** We reviewed medical records and interviewed the cases. Active case finding was conducted in the hospital. Case definition was HCW who had fever with rash or joint pain or conjunctivitis during 1 – 16 January 2014. Then acute and convalescent blood of suspected cases were collected and sent to test PCR for Dengue, Chikungunya, Zika viruses and test ELISA IgM for Measles, Rubella, Dengue, JE, Chikungunya viruses and Rickettsia at Thai NIH and US-AFRIMS Bangkok. Viral culture was also done followed by positive PCR at US-AFRIMS.

**Results:** Totally 5 cases were met case definition. Three were male and median of age was 24 years old with range from 22 to 36 years. The most clinical presentation was fever (100%) followed by rash entire body (80%), conjunctivitis (80%) and joint pain (40%). Other nonspecific symptoms included myalgia (100%), sore throat (80%), headache (40%) and without cough. All cases work in the same room at community medicine department of the hospital. They denied contact of any fever with rash patient before their onset. WBC count among 5 cases revealed low to high without leukocytosis. Platelet count was also normal. Five acute bloods were negative for all requested viruses except Zika virus. Zika virus PCR was positive for 4 cases (80%) and one sample was successful viral isolation. ELISA IgM in 5 convalescent bloods was negative for Measles, Rubella, Chikungunya and Rickettsia. But one sample was positive JEV IgM and another sample also positive Dengue IgM.

**Conclusions:** We confirmed the emerging and ongoing Zika fever outbreaks in Thailand since 2012 to 2015. The cross reactivity of antibodies between Zika and other endemic Flavivirus particular Dengue and JE viruses was observed. The diagnosis of Zika virus infection must rely on antigen detection such as PCR especially in Dengue and JE endemic countries. And at present, 5 laboratory centres in Thailand are able to test Zika PCR. Fogging and mosquito larva source reduction at both working place and the case's households were carried out. One month followed up at the hospital and household revealed no additional cases.