Dengue in Hainan: can we relax now?
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Background: Dengue occupies a major position, when we consider that Hainan Island, China's southernmost province is a dengue fever-prone area in the history and adjacent to endemic countries, thus at risk of virus introduction. In 1980, Hainan experienced its first outbreak of dengue. 437,468 cases of dengue fever were reported a year. Until 2007, Hainan hadn’t seen dengue fever since 1991. Over the period of 2008-2011, seven imported dengue fever cases were reported in Hainan, but no secondary transmission of dengue was reported.

Methods: A survey with cross-sectional design was administrated among all cities in Hainan province to analyze the status and type of larvae breeding in the indoor and outdoor water container and identify the subgroup of Aedes larvae. The blood samples from All individuals over 2 years old in selected villages were taken to detect the antibody level of IgG by ELISA.

Results: We found that the average BI, CI and HI in Hainan Province was 37.4, 20.7 and 24.1. There was highest BI and CI in Anding County. The BI for permanent water container was higher compared to inside container. All coastal cities, counties and volcanic regions have the distribution of Aedes aegypti and Aedes albopictus, Aedes aegypti mainly. We only found Aedes albopictus in cities and counties in the central region. We found 30 individuals positive for IgG antibodies (1.06%). There was no positive antibody carriers detected in Wenchang City and Qiongzhong County. The positive rate among men and women were 1.13% and 1.00%, respectively.

Conclusion: The Aedes as dengue vector distributed widely and with a high density in many cities in Hainan Province, there is the possibility of dengue fever pandemic again. In the case of no dengue cases reported during last decade and no potential epidemic of dengue fever, the immune barriers of people have almost disappeared in Hainan. So we should take measures to prevent outbreak or epidemic caused by imported dengue fever cases.

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Does influenza precipitate acute ischaemic heart disease? A prospective case control study
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Background: There is evidence that influenza is associated with cardiovascular morbidity. The aim of this study was to determine whether influenza is a significant and unrecognised underlying precipitant of acute ischaemic cardiac events during the winter season.

Methods: A prospective case-control study was conducted between 2008-2010 in the winter season, with cases being inpatients with acute ischaemic heart disease and controls being outpatients without acute ischaemic heart disease. The ratio of cases to controls was 1:1, and all subjects were aged >40 years. The predictor variable of interest was laboratory evidence of undiagnosed influenza. Viral nasal and throat swabs were collected at baseline to detect influenza by nucleic acid testing along with blood samples at baseline and 4-6 weeks post recruitment to measure influenza antibody levels and fold increases in influenza antibody titres.

Results: Over three influenza seasons, in 560 subjects (275 cases and 285 controls) without respiratory symptoms or obvious respiratory illness, 10% (55/560) of subjects, none of who were diagnosed as having influenza during their clinical encounter, had evidence of influenza infection by PCR or serology. There were 36/275 positive for influenza among cases and 19/285 among controls (OR 2.11, 95% CI 1.2-3.8, p = 0.011). However, in an adjusted analysis, only influenza vaccination was significant in predicting the risk of influenza, being highly protective against influenza (OR 0.02, 95% CI 0.003-0.15, p<0.0001). Patients who were mobile were significantly protected against influenza compared to patients who were not mobile, even adjusted for vaccination and comorbidities (OR 0.38, 95% CI 0.16-0.89).

Conclusion: Unrecognised recent influenza infection is common in hospital inpatients and outpatients, indicating that a clinical diagnosis may be missed in hospital patients with other presentations. We did not find that influenza was an independent predictor of acute ischaemic heart disease. However, vaccinated subjects were 50 times more likely than unvaccinated subjects to be protected, which highlights the benefit of vaccination in adults aged >40 years who have inpatient or outpatient encounters. Patients with decreased mobility have a higher risk of influenza and should be considered for vaccination.

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