

Noroviruses). For the bacteriological and parasitological analysis standard culture techniques were performed. For the detection of the presence of Noro-viruses (genotypes I and II) nested RT-PCR was used. Positive samples were confirmed by sequencing. In parallel, water samples were analyzed.

Outbreak investigation: A questionnaire was developed to gather information on patient's gender, age, symptoms, dates of onset symptoms, laboratory tests and hospitalization for the performance of epidemiological analysis.

Results: Of the patients, 92% had diarrhea, 48% vomiting, 40% nausea and 50% fever. 50% of the patients was hospitalized in pathology and paediatrician unit of general Hospital for 1 or 2 days. From 98 fecal samples analyzed in six, *S. typhimurium* was detected, in two 2, *S. enteritidis*, in four, *C. jejuni*, in one rota-viruses. In eight Noro-viruses type 1 and in 25 Noro-viruses type 2 were detected. 38% of the cases were from Xanthi city with wide presence. 39.7% of the patients were under 4 years old, 32,3% was from 5 up to 24 years old, 11,3% was from 25 up to 44 years old, 8,1% was between 45 and 64 years old, 8,5% was > to 65 years old. Water analysis although showed *E.coli* contamination, no noroviruses was detected.

Conclusions: During epidemiological investigation of the increased number of cases, all criteria for Noro epidemics, were confirmed.

doi:10.1016/j.ijid.2008.05.261

16.052

A Cohort Study to Assess the New WHO Japanese Encephalitis Surveillance Standards

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Background: Approximately half the world's population lives in areas affected by Japanese encephalitis (JE). JE can be controlled through vaccination, but disease surveillance is needed to support countries in their decisions on vaccine implementation. New surveillance standards for JE have been produced by the WHO, but it is unclear how good they are. In this study we assessed the field test version of the new WHO JE surveillance standards.

Methods: We applied the clinical case definition of acute encephalitis syndrome (AES), laboratory diagnostic criteria and case classifications to patients with suspected central nervous system (CNS) infections in southern Vietnam.

Findings: 380 patients (149 children) with suspected CNS infections were recruited and evaluable, of whom 296 (96 children) met the AES case definition. 54 children were infected with JE virus (JEV), of whom 35 (65%) had AES, giv-

ing a sensitivity of 65% (95%CI 56–73%), and specificity 39% (30–48%). 9 adults with JEV all presented with AES. The 19 JEV-infected children missed by the surveillance included 10 with acute flaccid paralysis, 2 with a flaccid hemiparesis, and 6 with meningism only. Altering the case definition to include limb paralysis and meningism improved the sensitivity to 89% (83–95), whilst reducing the specificity to 23% (15–30). An acute serum sample diagnosed 41(68%) of 60 JEV positive patients; an admission CSF diagnosed 33 (72%) of 46 patients with this sample, including 7 that were serum negative. Examining a 2nd sample at day 10 diagnosed 61 of 62 patients. 5 patients with neurological manifestations of dengue infection had JEV antibodies in serum, and would have been misdiagnosed had we not tested for dengue antibodies in parallel.

Conclusion: The case definitions detected about two thirds of the children infected with JE virus, missing those presenting with acute flaccid paralysis. A modified case definition which included acute paralysis and meningism detected nearly 90% of children. An acute CSF sample is more sensitive and specific than an acute serum sample. This formal evaluation of surveillance standards during their development provides an evidence base to support their recommendation, and should be encouraged for future WHO standards.

doi:10.1016/j.ijid.2008.05.262

16.053

Laboratory Surveillance for Influenza in Cuba

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Background: Influenza epidemics are caused by rapid evolution of the viral genome and continue to play a significant role in the annual frequency of mortality and morbidity as a result of respiratory tract infection. World Health Organization created more than 50 years ago the World Influenza Surveillance System, which has contributed to the knowledge and the understanding of the epidemiology of these viruses. However, it still is necessary to improve and strengthen the surveillance and control of this disease all over the world.

Method: During the 2005–2006 influenza season, the totality of respiratory samples were analyzed using two multiplex RT nested-RCP multiplex for the detection of 14 respiratory virus and an third RT nested PCR assay (L gen) was used for detection of hMPV. Recently, we introduce two RT nested-RCP for the typing and subtyping of hemagglutinin and neuraminidase of influenza A virus, including the subtype A (H5N1).

Results: Virological surveillance highlighted the predominant circulation of B viruses (32% of isolates) in Cuba, in contrast to many other countries in Europe and North America where AH3N2 viruses were isolated most frequently, and in contrast to the infrequent isolation of B viruses in Cuba during the previous years. Influenza A(H1N1) viruses were not identified. However, the surveillance through serum pair studies showed a predominant positivity to influenza A (H3N2) and the circulation studies using monoserum of