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1789. Frequency of Chikungunya, Dengue, and Zika Virus in Acute Febrile Illness in Paired Urine and Serum Samples in Mexico

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Background. Given the nonspecific clinical presentation that dengue (DENV), Zika (ZIKV), and chikungunya viruses (CHIKV) have, nucleic acid amplification tests have become the primary diagnostic tool. Multiplex real-time PCR assays have been approved for their use in the qualitative detection of ZIKV in urine but there are few data regarding CHIKV and DENV. We report the frequencies of PCR detection for DENV, ZIKV and CHIKV in paired urine and serum samples in Mexico.

Methods. We included patients with acute febrile illness from five centers, located in Guadalajara and Monterrey, from September 2016 to December 2018. Viral RNA was extracted from samples, reverse transcribed and subjected to real-time PCRs specific for DENV, CHIKV, and ZIKV. Patients were considered a positive case if any of the three tests were positive. The obtained data were analyzed using descriptive statistics.

Results. A total of 978 patients were included. A positive result was obtained in 331 patients (33.84%): 184 for ZIKV, 129 for DENV, and 18 for CHIKV. The tests were positive in both specimens in 56 (30.4%), 29 (22.4%), and 4 (22%) of the cases, respectively, while an isolated positive urine test was found in 74 (40%), 5 (3%) and 4 (22%) of the cases. Two patients were positive for both ZIKV and DENV, and two were positive for both ZIKV and CHIKV.

Conclusion. Acute febrile illness was potentially attributable to infection with one or two of the studied arboviruses in up to 34% of our patients. Out of all the cases, 25% were positive only in urine samples. Therefore, some diagnosis could be missed when analyzing only serum-based tests. Paired serum and urine sampling should be recommended when detecting arbovirus in acute febrile illness.

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1790. Single-Center Experience and Lessons Learnt from Management of Nipah Virus Outbreak in India

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Background. Nipah virus (NiV) is re-emerging zoonotic RNA virus belonging to Paramyxoviridae family. Suspecting Nipah virus in a NiV naive tropical area is a challenge. NiV management is further confounded by acute presentation, high mortality, broad species tropism, multiple modes of transmission, difficulty to diagnose and lack of definitive treatment.

Methods. Recent NiV outbreak that lasted for approximately 1 month (2–29 May 2018) and resulted in 23 cases with a case-fatality rate of 91%. We present clinical summary and management of five cases managed at Baby Memorial Hospital, Kozhikode, India from May 17, 2018 to May 30, 2018 and were epidemiologically linked to the index case. All patients presented with initial nonspecific prodromal symptoms of fever, muscle pain, watery diarrhea. Median age was 53 years, four were males, median hospital stay was 3 days, median incubation period of was days. Further complications, included encephalitis with viral bronchopneumonia/acute respiratory distress syndrome (ARDS) in 100 %, patients, encephalitis with viral bronchopneumonia/ARDS with myocarditis in 60 %patients, and excumbed to the illness.

Results. Hematological Investigations showed normal TLC with a mean of 7,920 cells/ mm³, mild thrombocytopenia (mean 1,57,800) high Hb 16.12(SD1.10), ESR 19 mm/hr, DLC-N 82% high relative neutrophilic cytosis. Normal liver and renal function, Na⁺ 133 meq/L. CSF analysis showed high opening pressure, 100% lymphocytic pleocytosis, mean CSF sugar 118 mg/100mL, CSF protein 73.6. CT chest -bilateral airspace opacities and ground glassing. Brain FLAIR sequence showed nonspecific hyperintensities in white matter and brainstem correlating with vascultic changes. Laboratory diagnosis of NiV was made by Real-Time RT–PCR on throat swab, blood, urine and cerebrospinal fluid by Manipal virus research center and National Institute of Virology. Pathological autopsy was done in 2 cases and found noncontributory.

Conclusion. We report clinical and public health management experience from one of the three hospitals managing the patients affected with NiV. Managing outbreaks of high infectivity requires persistent organized and committed healthcare interventions



