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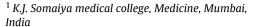
Trends Of Dengue Infection A 3 Year Observation Study From Mumbai

A. Barua [1,*], M.E. Yeolekar [2]

[1] *K.J. Somaiya medical college, Medicine, Mumbai, India*
[2] *K.J. Somaiya Medical College and Hospital, Internal Medicine, Mumbai, India*

Background: Dengue is emerging as the most common monsoon related illness in India, particularly over the last few years. It has apparently overtaken Malaria as the major cause of acute febrile illnesses. An in depth observation of its trends, will pave the way towards its control. This will help contain Dengue related morbidity and mortality. It continues to dominate the monsoon related illnesses in Mumbai. This trend is persistent and rising. Mumbai, in particular, being populous, can be a breeding hub for Aedes. This combined with extensive housing projects can lead to the exponential rise in Dengue cases. This underscores the need for focussed research.
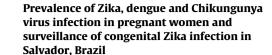
Methods & Materials: A prospective, observational study was carried out on adults (>12 years) admitted with, acute undifferentiated febrile illness (temperature > 38 degree c) within 14 days of fever. The study was conducted during 3 consecutive monsoons (June to October; 2015 to 2017) in a teaching hospital in Mumbai. Clinical examination and laboratory data was studied and analysed as per study criteria.

Results: During 2015,of the 879 admitted patients with acute febrile illness,206 were Dengue and 117 Malaria. Leptospirosis (12), Enteric fever (84), and Viral Hepatitis(10) constituted the other major diagnosed infections. The rest comprised undiagnosed fevers.2016 saw a further surge of Dengue. Out of 1214 admissions for acute febrile illnesses, 369 were Dengue, whereas 135 tested positive for Malaria. The rest of the diagnosed infections were-Enteric fever (116) Viral Hepatitis (10), Leptospirosis and Chikungunya, three each. Undiagnosed fevers constituted the rest. During 2017,of the 1008 cases of AFI, till October,239 confirmed Dengue cases and 65 Malaria cases was diagnosed. Enteric fever (68), Viral Hepatitis (8) and Leptospirosis (4)comprised the rest. Undiagnosed fevers comprised the rest.

Conclusion: The sudden spurt of Dengue during September and October, this year, coincided with the erratic monsoons, fluctuating temperatures, torrential rains, followed by sunny weather, contributing to the climate change. Ongoing construction added to the increased breeding sites. Though there is a rise in cases during the 3 years mortality is contained. Awareness, early reporting and effective management contributed probably. Dengue continues to be the predominant monsoon related infection warranting focussed attention.

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Prevalence of Zika, dengue and Chikungunya virus infection in pregnant women and surveillance of congenital Zika infection in Salvador, Brazil

J.V. Oliveira [1], A. Duarte [2], C. Santos [1], L. Pessoa [1], C. Magalhães Filho [3], J. Lima [3], D. Carvalho [3], T. Xavier [4], E. Figueiredo [4], M. Giovanetti [3], B. Almeida [3], J. Goes [3], F. Lima [2], L.C. Alcantara [3], I. Siqueira [3,*]

[1] *Instituto Gonçalo Moniz- Fiocruz, Salvdor, Brazil*
[2] *Faculdade de Farmácia- Universidade Federal da Bahia, Salvador, Brazil*
[3] *Instituto Gonçalo Moniz- Fiocruz, Salvador, Brazil*
[4] *Maternidade de Referência Prof. José Maria de Magalhães Neto, Salvador, Brazil*

Background: An unprecedented outbreak of Zika virus (ZIKV) occurred in Brazil in 2015. Approximately 18,372 cases were notified in the city of Salvador, located in the state of Bahia in northeastern Brazil.

Methods & Materials: Beginning in February 2016, active hospital surveillance for congenital Zika virus infection and a cross-sectional study at a reference maternity hospital were initiated to evaluate the prevalence of recent and previous infections by ZIKV, Dengue and Chikungunya virus in pregnant women as well as congenital infection by ZIKV in newborns.

Results: To date, we have enrolled 224 women and 223 newborns. The mean age of women is 25 ± 6 years, with 146 (61%) reporting an exanthematous illness during pregnancy. The majority of these cases occurred between February and April 2016. Most babies were born by vaginal delivery (60%) at gestational age of 37.4 ± 5 weeks. Most (53%) of the newborns were male and 48 (21.5%) were diagnosed with microcephaly. Of these, 16 (33%) were admitted to a neonatal intensive care unit and four (8.3%) died. Many women (n = 133) were tested by ELISA IgG for Zika, Dengue and Chikungunya at the time of delivery. The majority (94%) were Dengue IgG positive, 94 (71%) were Zika IgG positive and 39 (28.6%) presented Chikungunya IgG positivity. Positive ELISA IgM for Zika in mothers and newborns was 7.4% and 5.6% respectively. ZIKV RT-PCR was performed in 114 samples from newborns (umbilical cord blood and urine), yielding 17 (15%) positive results, five of which were from microcephalic babies, while 12 were normocephalic. ZIKV RT-PCR positivity was 19.2% in microcephalic newborns and 13.6% in normocephalic newborns.

Conclusion: In light of these findings, we suggest that microcephaly should be considered a severe form of congenital Zika infection, and that less severe presentations should also be evaluated. We intend to further characterize the clinical manifestations associated with congenital ZIKV infection in a prospective follow-up study involving the babies with congenital ZIKV infection (with and without microcephaly) to more comprehensively describe the clinical manifestations, complications and natural history associated with ZIKV.