

Serological and molecular evidence of the re-emergence of chikungunya virus within north central nigeria, a case study of Kogi and Kwara state

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Abstract

Chikungunya virus (CHIKV) is an emerging threat of the arboviral family. This study was aimed at determining the serological prevalence of CHIKV, Malaria and typhoid co-infection among febrile patients within north central Nigeria. Rapid Biopanda malaria and typhoid detection kit was used to detect the presence of Malaria and typhoid respectively. Biopanda ELISA immuno assay kit was used for the detection of IgM and IgG anti-CHIKV among the test sera. Out of 477 febrile patients tested, 37%(176[477]) were sero-positive to Malaria parasite, 35.5% (142[477]) were sero-positive to Salmonella typhi/paratyphi. Anti-CHIKV prevalence was observed to be 21.4% (102[477]) which was defined as positive to either IgG/IgM or both. There was no significance of anti-CHIKV acquisition to age and gender. Female [62%(38(102))] were more sero-positive than male [37.3%(38(102))], Age group 21 -30 had the highest prevalence [39.2%(40(102))] while age group >50 had the lowest prevalence [8.8%(9(102))]. An RT-PCR of 43 IgM positive samples confirms the detection of CHIKV in 48.8% [21(43)] of the IgM samples. Out of the 102 positive anti-CHIKV patients, 28(27.5%) were co-infected with Malaria parasite, 32(31.4%) were co-infected with Typhoid and 7(6.9%) were co-infected with both Malaria and typhoid. Educational qualification, use of mosquito net, presence of stagnant water and the type of house were observed to be influencing risk factors towards the acquisition of chikungunya infection. Therefore, vector control scheme and surveillance should be highly encouraged and chikungunya diagnosis should be imperative within the study region.

Biography:

Bello K.E belongs to Kogi state University, Nigeria. Specialized in Microbiology and virology department. Research interests are HIV and HCV virus, gum exudates, UTI and Chikungunya virus.

Speaker Publications:

1. "Seroprevalence of HBV, HCV, and HIV and Associated Risk Factors Among Apparently Healthy Pregnant Women in Anyigba, Nigeria"
2. "Potential of cashew gum exudates as substrate for bioethanol production using *Aspergillus niger*"
3. "Urinary tract Infection in children in Gusau, North Western Nigeria"
4. "Serological survey of Chikungunya virus in Ilorin Metropolis, Nigeria"

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