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ISSN: 2329-891X
Journal of Tropical Diseases & Public Health

Perspective

Global Epidemic of Chikungunya Virus and Mosquito-Borne Diseases

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ABOUT THE STUDY

Chikungunya fever, also known as chikungunya virus, is a mosquito-borne viral disease transmitted primarily by *Aedes aegypti* and *Aedes albopictus*. Chikungunya Virus is an RNA contagion that belongs to the arthropod born alphavirus rubric and belongs in the family Togaviridae. The origin of the word comes from the typical affections of the complaint that lead to a fraudulent donation and arthralgic joint pain symptoms.

Chikungunya contagion complaint has caused multitudinous pandemics in Africa and Asia. In 2005-2006 a major outbreak passed in the Indian Ocean. Imported cases were set up in Asia, Australia, USA, Canada and international Europe. In 2007, an outbreak of indigenous chikungunya contagion infections took place for the first time in Europe, Italy. In 2010 and 2014, indigenous cases were reported in France. In December 2013, chikungunya surfaced in the Caribbean and snappily spread in the Americas. Now the contagion has spread to the whole sub-tropical regions of America, Africa and Asia.

The most common signs or symptoms of the chikungunya contagion are an acute onset of fever and common pain which is generally bilateral and symmetric. Generally the joints involved are small joints of the hand, wrist, and ankles. While the larger joints involved are the knee and shoulder.

Some other symptoms one may complain of are headache, nausea vomiting, muscle pain, common lump, or a maculopapular rash. This presentation usually begins 3-7 days after an infectious mosquito bites the individual. Within 7-10 days, these acute symptoms should be resolved. The majority of the patient's joint pain will resolve within fairly quickly within 1-3 weeks. However, some cases of chikungunya virus the joint pains can persist for 4 months to up to 5 years. This may include exacerbation of joint pain and stiffness.

Rare complications can include uveitis inflammation of middle towel in the eye known as the uvea, retinitis inflammation of the retina in the eye, myocarditis inflammation of the middle heart sub caste, hepatitis inflammation of the liver, nephritis inflammation of the feathers, bullous skin lesions, hemorrhage, meningoencephalitis inflammation of the brain and its meninges, myelitis inflammation of the spinal cord, Guillain-Barre pattern, and cranial whim-whams paralysis.

Laboratory diagnosis of Chikungunya fever

As the clinical instantiations of Chikungunya fever act those of dengue and other complications caused by arthropod borne contagions of the Alphavirus genus, laboratory diagnosis is critical to establish the cause of opinion and initiate specific public health response. Types of laboratory tests available and samples needed Laboratory criteria include a dropped lymphocyte count harmonious with viremia. Still a definitive laboratory opinion can be fulfilled through three main laboratory tests contagion insulation, serological test and molecular fashion of Polymerase Chain response (PCR). Specimen is generally blood or serum but in neurological cases with meningo- encephalitic point, CSF (Cerebro- Spinal Fluid) may also be transferred.

Contagion insulation provides the most definitive opinion, but takes one to two weeks for completion and must be carried out in biosafety position III laboratories to reduce the threat of viral transmission. The fashion involves exposing specific cell lines to samples from whole blood and relating chikungunya contagion-specific responses. The insulation process is time consuming and the degree of success is dependent on a number of complicating factors, for illustration, time of collection, transportation, conservation of cold chain, storehouse and processing of samples.

Serological diagnosis requires a larger quantum of blood than the other styles, and uses an ELISA assay to measure chikungunya-specific IgM situations in the blood serum. Chikungunya antibody tests are generally applicable after the first week of symptom onset and onward. Serum attained from 10-15 ml of whole blood is needed. An acute phase serum must be collected incontinently after the onset of illness and the convalescent phase serum 10-14 days latterly. The blood instance

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Received: 04-May-2022, Manuscript No. JTD-22-16996; **Editor assigned:** 06-May-2022, PreQC No. JTD-22-16996 (PQ); **Reviewed:** 23-May-2022, QC No. JTD-22-16996; **Revised:** 30-May-2022, Manuscript No. JTD-22-16996 (R); **Published:** 07-Jun-2022, DOI: 10.35248/2329-891X-22.10.328.

Citation: Amaral K (2022) Global Epidemic of Chikungunya Virus and Mosquito-Borne Diseases. J Trop Dis. 10:328.

is transported at 4 °C and not firmed for immediate transfer to the laboratory. Only if the testing cannot be done incontinently, the serum instance should be separated and also stored and packed firmed. ELISA test is relatively specific with veritably little cross reactivity with affiliated alphaviruses.