

CHIKUNGUNYA: Emergence of an Alarming Virus

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Dear Editor,

Recently it has been reported in media that many cases of a mosquito-borne viral affliction, Chikungunya virus (CHIKV), were diagnosed in Karachi for the first time in Pakistan; but this news was nothing more than a rumor. The WHO and Pakistan health ministry has not reported a single confirmed case of CHIKV in Pakistan till date [1]. The word Chikungunya is a Makonde word which means “bended or stooped posture” that is often seen in sufferers secondary to arthralgia [2].

The first global case of CHIKV fever was identified in southern Tanzania in 1952 [2], whereas first epidemic in Asia occurred in Thailand in 1958 [3].

CHIKV is a single stranded RNA virus belonging to genus Alpha virus and family Togaviridae. Considering the geographical features, Pakistan is among the countries that provide nurturing environment to these viruses in order to complete their life cycle. CHIKV is transmitted to humans by the bite of female Aedes mosquitoes, most commonly Aedes (Stegomyia) aegypti in tropical and subtropical regions and Aedes (Stegomyia) albopictus in temperate areas. Of note, same vectors are known for transmission of dengue virus. These mosquitoes dwell in stagnant water present either indoor or outdoor. Common breeding sites are household water storing containers, water pools, plant pots and trees etc. Their peak activity is in the mornings and afternoons [2].

Disease onset occurs within 2 to 12 days after the bite of mosquito. The hallmark symptom seen in patients is severe arthralgia. Other symptoms are sudden fever, nausea, vomiting, myalgia, headache, malaise and rashes. Some of the reported complications are ophthalmic, neurological, gastrointestinal and cardiac.

Occasionally, it can cause death in elderly patients [2]. Treatment is conservative as no anti-viral therapy reduces the activity and duration of the virus. Rests, increased fluid intake, anti-pyretic for fever, anti-inflammatory for arthritis are among some commonly prescribed medications. Aspirin is avoided due to the risk of

bleeding in these patients [4].

Preventive measures are the same as that for dengue virus due to common vector and include the use of mosquito repellent creams and lotions, coils, wearing clothes with full coverage and permethrin sprays. Avoid water storage or collection for more than 4 days and it is recommended to empty and dry all water repositories on every fifth day to halt the life cycle of this virus [4]. Currently a vaccine has been developed for CHIKV but its efficacy in clinical trials is yet to be proven [5]. Other measures that should be observed include public awareness programs and effective reinforcement of preventive strategies developed for dengue fever in order to prevent emergence of CHIKV epidemics in Pakistan.

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