

## **EDITORIAL**

### **DENGUE VERSUS CHIKUNGUNYA: LESSER KNOWN FACTS**

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Every year in Pakistan, a considerable number of Dengue fever cases occur. Awareness campaigns about Dengue are all over the country. Information about Dengue fever is written on the covers of our academic school books. Almost every Pakistani knows about the role of platelet count in diagnosing Dengue and that it is spread by a mosquito that is different from that causing malaria. All these results from immense awareness about dengue fever through print media and social media.<sup>1</sup>

As soon as the season of Dengue is here, every person feels that he or she may suffer from this sooner or later. Fever, along with severe muscular pains, has given dengue fever its classic name, "breakbone fever." Many diagnostic tests are available in labs for early detection of Dengue. Still, these tests are often negative, and only clinically a patient is considered to be suffering from Dengue.<sup>2</sup>

Our point of discussion for today's editorial is that some of the cases labeled as Dengue may be of chikungunya, especially when the laboratory tests for Dengue are negative. Clinically the patient who is suffering from Dengue or chikungunya usually has a similar type of fever and myalgia, but just as we have less information regarding chikungunya, we consider that every fever with myalgia may be dengue fever.<sup>3</sup>

Chikungunya is a virus from the family of Togaviruses. It is an RNA virus of positive polarity. It is single-stranded and enveloped.

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The other virus that is important clinically and belongs to this family of Togaviruses is Rubella, which causes German measles and is responsible for congenital malformations if a female acquires it during the first trimester of her pregnancy.

An interesting fact is that chikungunya is also spread by the same *Aedes* mosquito responsible for dengue transmission.

The mosquito species most frequently linked to the spread of dengue is *Aedes aegypti*. Dengue and Chikungunya are exclusively spread by female mosquitoes. In addition, *Aedes albopictus* can also cause Chikungunya.<sup>4</sup>

*Aedes aegypti* mosquito's flight range is < 100 meters. It's an aggressive daytime biter. When it is infected, the virus stays inside the mosquito for approximately 30 days. This mosquito feeds on artificial household items. This belongs to the category of freshwater mosquitoes that are domiciliary and thrive in residential areas. Water coolers, Air Conditioners, used oil containers, water-filled tanks and vessels, or canisters made up of metal, plastic, rubbery materials, cement and muddy containers, which are usually kept open and are non-functional, can get loaded with water and become suitable areas for cultivation of *Aedes*.<sup>4,5</sup>

A very interesting point about the *Aedes* mosquito responsible for the spread of both Dengue and chikungunya is that it is no longer just a clean water breeder. The virus has adapted itself to the filthy conditions prevailing in the cities. The presumptions that the *Aedes* female vector breeds only in clean water is no longer true as its larvae show its existence in dirty water, too.<sup>4,5</sup>

From the above discussion, it is evident that as the breeding mosquito is the same for both Dengue and chikungunya, their season of spread is also the same. When we have too many cases of dengue fever, there are chances that patients suffering from chikungunya are also there.<sup>5,6</sup>

Chikungunya was first described in Tanzania, Africa, in 1952. Its name is made up of the Makonde verb - Kun gunyala. In Swahili, it denotes 'becoming twisted' or, more distinctively, 'something which is out of shape.' This terminology refers to the stooped posture of the infected person because of severe muscular and bone pains resulting from chikungunya virus infection, the same as classical dengue breakbone fever.<sup>5,6</sup>

In chikungunya, there is severe headache, nausea, vomiting, stomach ache, arthralgia with or without edema, sacral backache, and redness on the skin. Despite all the similarities to Dengue infection, chikungunya infection does not involve the development of hemorrhagic or shock syndrome. There may exist Flu-like symptoms, shivering, High-grade temperature (40°C or 104°F), joint pains or arthritis that may last for several weeks, conjunctival effusion, mild photophobia, as well as accompanied by severe weakness.<sup>6</sup>

Our aim for this editorial is only to spread awareness about chikungunya along with Dengue, as it's a known fact that almost the whole of Pakistan now has information regarding Dengue. Still, almost very few will know that a similar illness in the same season is chikungunya. There should also be awareness and campaigns regarding chikungunya too.

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