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**DENGUE AND CHIKUNGUNYA; A STUDY OF THE BORDERING ON SYMPTOMS  
AND DIAGNOSIS**

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**ABSTRACT**

Dengue and Chikungunya are viral diseases with very similar symptoms as high fever, headache, joint pain, rashes, and lethargy. Both viral infections are spread by Aedes mosquito. Still categorizing the exact disease is crucial since management of Dengue is greatly dangerous and may have to urgent medical intervention. It is also possible for a patient to have Dengue and Chikungunya at the same time (coinfection). Sometimes Malaria is also baffled with Dengue or Chikungunya. Interestingly both are caused by two unlike viruses and often consequences result in hospitalizations. The present study is designed according to the current situation of Karachi, where chikungunya is epidemic now a- days , moreover dengue was also active in previous days. The parallel symptoms put up the patient and healthcare practitioners in ambiguity for diagnosis, management and early precautions. For the purpose the data was collected from two public sector hospitals in Karachi to identify the number of patients and early symptoms to cure the population in endemic situation of Chikungunya.

**Keywords: Chikungunya, Dengue, Fever, Patient, Headache, Malaria**

## INTRODUCTION

Chikungunya was notorious in the region of Asia, Europe, Africa and around the Indian and Pacific Oceans prior to four years [1]. Chikungunya is caused by a Togaviridae alphavirus, while dengue is caused by a Flaviridae flavivirus. Dengue is much more frequent and more lethal than Chikungunya [2, 3]. Mosquitoes of *Aedes* species is responsible for transmitting the both viruses in the vicinity means the mosquitoes after tainted with the virus, disperse the disease to the natives [4, 5]. Furthermore blood transfusion cannot be accountable of transmittance of Chikungunya [6]. According to a report confined diffusion of CHIKV is recognized as more than one million cases approximately in forty nation states [7]. Interestingly both appears with the same symptoms as like fever and polyarthralgia. Other signs are headache, nausea, vomiting and skin rashes. Common laboratory findings of dengue and chikungunya consist of lymphocytopenia, thrombocytopenia, elevated creatinine, and elevated hepatic transaminases but the decrease platelets count is specific with Dengue.

Precise symptoms take maximum seven days to appear and rarely lead to myocarditis, hepatitis, nephritis. Death in Chikungunya is

exceptional usually mostly occur in older and the patient who have very weak immune system [8-10]. However the person once attacked by the virus should be prevented from the prospect infections. The problem of differentiation between dengue and chikungunya arise at early on stages specifically in the community where dengue has already and recently endemic, as the symptoms are almost same, however joint pain in Chikungunya is more severe and it persists for a long period as compared to dengue, may be for years causing long term quality of life issue [11]. Bleeding may become a warning sign in dengue not in Chikungunya as platelets count remains normal [12]. At early stage by the onset of fever, the disease is considered as general viral infection. Diagnosis and differentiation can be done on the basis of clinical features and laboratory tests [13]. The treatment of symptoms can be a good tool to manage the disease as like non-steroidal anti-inflammatory drugs to relieve pain and fever. Nonetheless in dengue the platelets count is maintained by the I V infusion [14].

Unfortunately, the disease has neither precise treatment nor vaccine, hence transmission of the virus is the only preventive tool to reduce the disease occurrence in high frequency that

can be achieved mainly by controlling the mosquito vectors or disruption of person-vector contact. Measures must be taken for mosquito proliferation control. As like the number of favorable breeding sites, especially nearby to the surface of water in all sorts of vessel, vases and used tyres must be reduced. Additionally, winter season interrupts the evolution from egg to adult but the eggs are resistant to chilly climates till the favorable temperature conditions [15, 16]. The recently approaches of research has developed mathematical models for a number of studies have been conducted to explore most superb control of certain infectious and vector-borne diseases [17]. The system is designed depending on the ordinary differential equations (ODEs) for the host and vector residents. That helps to develop different best possible strategies for prevention and vector control of the disease among population [18].

#### **METHOD:**

The present study was conducted to evaluate the current episodes of Chikungunya in Karachi. For the purpose two economically approachable hospitals for the general public were selected, one was the Jinnah hospital and other was civil. The data was collected through interviewing a six point questionnaire to the twenty duty doctors and

thirty nursing staff, who were looking after and observing the patients in special wards. The study period was from August, 2016 to January 2017, when the disease was contagion. The queries enclosed the symptoms, treatment and cure of the disease. The indications identified were helped to discriminate the disease from dengue and simple viral fever.

#### **RESULT:**

During the study a specific ward arrangement was observed in the mentioned hospital for the patients of chikungunya and dengue. That indicates the high frequency of diseases. According to the data obtained patient feels rashes, joint pain and fever in both diseases but more rashes were in chikungunya and also the joint pain prolongs. Interestingly bleeding may become treacherous in dengue but not in CHIKV as the platelets count is not troubled (fig.;1). In CHIKV sometimes doctor prescribes antipruritis or in rare cases antimalarial, that is of no use. In the present study in mentioned hospitals patients were treated in separated wards and high protein diet was suggested. The study also reveals the prospect for a patient to have Dengue and Chikungunya at the same time (co infection). Moreover two hundred fifty and three hundred fifty patients came in Jinnah and Civil hospital respectively and most were

Malir and Korangi residents, where hygiene conditions are not healthy and satisfactory, as the research reveals that mosquito grow on stagnant dirty water and damp places and mosquito vector is a major tool for making the infection epidemic.

### CONCLUSION:

According to the present study the endemic situation of dengue and chikungunya can be controlled by following hygiene and healthy environmental measures and consequently

the government is liable for the basic hygiene obligation to the residents and associated control model should be formulated order to originate best prevention and treatment approaches with nominal expenditures. The patient must be managed carefully as muddle up signs of both the diseases may prolong the correct findings and that may develop the condition worst.

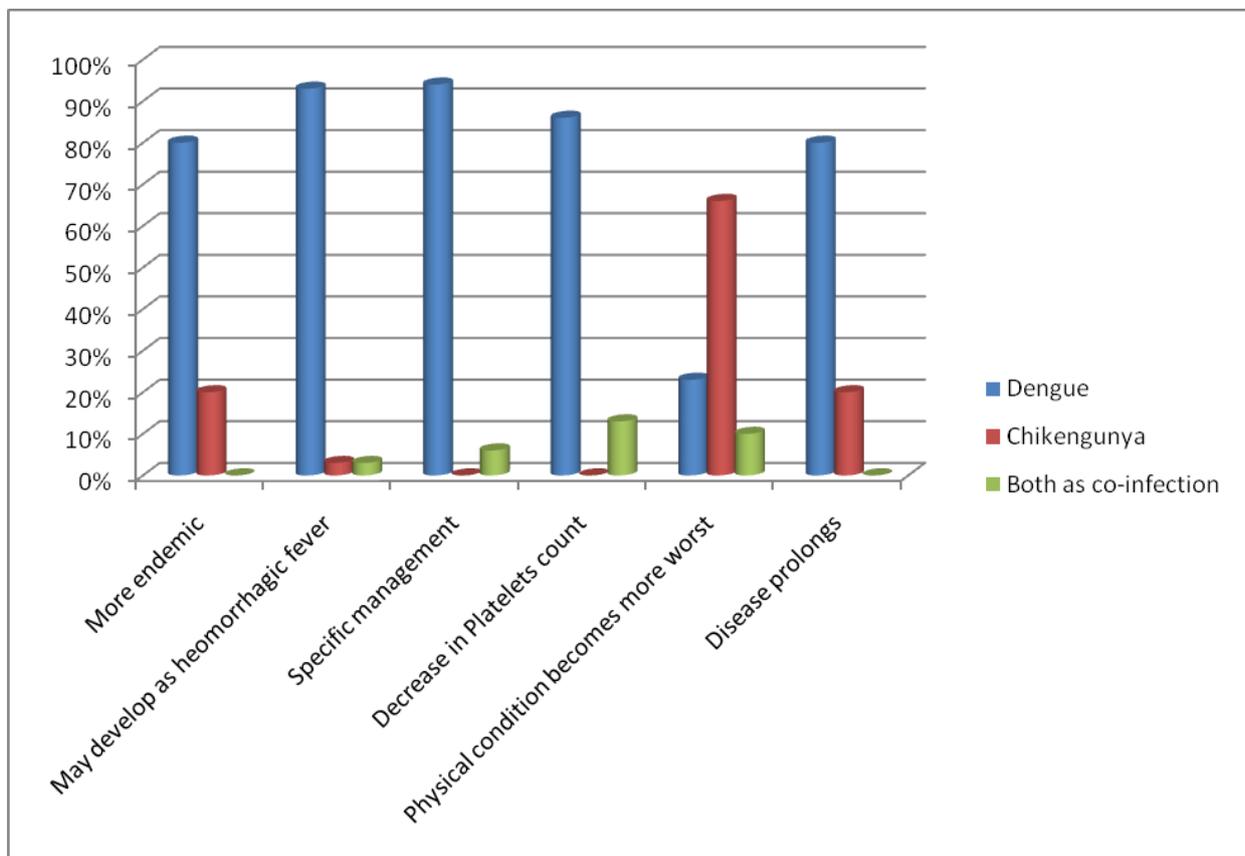


Fig 1: An Overview of CHIKV Epidemic State in Karachi

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