

## Chikungunya :- A Bang on the Silent Door



### MEDICAL SCIENCE

**KEYWORDS :-** Chikungunya virus(CHICKV), Aedes Aegypti mosquito, IgM-Elisa

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#### ABSTRACT

*Chikungunya(CHICKV) infection has given a bang on the silent door of medical field in Bhagalpur(Bihar) where it was a non existent entity.Till recent past no case was reported in this region of Bihar,but this year few cases have been seen which is a matter of great concern for the people of Bhagalpur in general and for medical persommel in particular*

**INTRODUCTION :-** CHICKV fever is caused by chikungunya virus which is an enveloped positive-strand RNA virus belonging to genus *Alfavirus* of the family *Togaviridae*. In 1952 first case of CHICKV was detected in the Makonde Plateau in Africa where the virus is known to be maintained in the sylvatic cycle of wild primates and mosquitoes such as *Aedes taylori*. Later in 1958 it was detected in urban Asia such as Thailand mainly transmitted by *Aedes aegypti*. In India CHICKV was first detected in 1963 in West Bengal. It was followed by several epidemics in Chennai, Pondicherry, Vellore, Vishakhapatnam, Rajamundry, Kakinada, Nagpur and Barsi between 1964 and 1973. The outbreak started in 2005 from the coastal regions of Andhra Pradesh and Karnataka. Since April 2006 an outbreak of CHICKV fever has been ongoing in Karnataka, Maharashtra, and Andhra Pradesh. From here it may have spread to the neighbouring states.

This year's robust monsoon has come at a price a zenith in chikungunya cycles. Until August 2016, 12255 cases of chikungunya have been reported in the country. In Delhi this year it has been seen that although the cases of CHICKV has been on the increase but the clinical features subside early with supportive treatment.

**AIMS AND OBJECTIVES :-** Although cases of CHICKV infection are seen in different parts of India but the overall incidence in Bhagalpur(Bihar) was negligible. Sudden appearance of these cases in this area of Bihar is really a matter of concern. This study was conducted to evaluate the current scenario of this illness as to how and why all on a sudden CHICKV infection has emerged in Bhagalpur.

**METHODS:-** 200 cases of fever attending J.L.N. Medical College Bhagalpur in past over 2 months were included in this study. Thorough clinical examination was done in each and every case to exclude any systemic illness like tuberculosis, pneumonia, septicemia, kalaazar, malaria etc.

Among these 200 cases rapid card test was done for dengue and it was found that 195 cases were dengue positive. Their serum was sent for Elisa test for confirmation. Rest 5 cases were proved to be of CHICKV infection. It was confirmed by Ig-M Elisa test

**RESULT:-** Among suspected CHICKV patients fever, headache, abdominal pain vomiting, rashes and excruciating joint pains were the most notable presenting features. It was on the basis of severe joint pains that a provisional diagnosis was made which was later confirmed by Ig-M Elisa test for Chikungunya. After confirming the diagnosis these patients were treated symptomatically by giving paracetamol and cold sponging for fever and joint pains, antibiotics for the prevention of secondary infection, intravenous fluids, anti emetics for vomiting, proton pump inhibitors and

H2 blockers for abdominal pain. The symptoms gradually subsided and the patients made a speedy recovery. The duration of stay in the hospital was from 3 days to 9 days. One remarkable thing was that all the patient recovered and there was no mortality.

**DISCUSSION:-** CHICKV infection once known to be the disease of South and Western India has spread its arms in places far away from the place of its origin. The patients which were diagnosed and treated in Bhagalpur were definitely the residents of this place but they lived in Delhi where they had fever and for the sake of treatment they came back to Bhagalpur. These cases were not the indigenous one. The matter of concern is that *Aedes aegypti* the vector for CHICKV is also the vector for Dengue, but the overall incidence of CHICKV infection is far less as compared to the incidence of Dengue which is a more serious condition with many complication and even death. As it may be deduced that the cases diagnosed and treated for CHICKV at Bhagalpur were coming from Delhi but once they are here there are chances that people in this area are also exposed to be bitten by CHICKV infected *Aedes Aegypti* which may later on become an indigenous case. There are ample fresh water bodies available in all most all the places here giving a better breeding ground for aedes aegypti.

**SUMMARY:-** CHICKV is a viral disease transmitted by the bite of infected *Aedes Aegypti* mosquito. The term has been derived from Kungunya meaning to become contorted or more simply known as "that which bends up". This refers to the stooped posture adopted by the patient of CHICKV as a result of severe arthritic symptoms. The incidence of this illness is highest in monsoon and post monsoon period when there is ample fresh water logging in majority of the places which is a safe heaven for the breeding of *Aedes aegypti* the principal vector for CHICKV infection. The presenting features in CHICKV is fever, headache, abdominal pain, vomiting, rashes, and most important severe joint pains. Numerous patients with all these or a combination of these symptoms are attending the hospital and therefore while investigating these cases one must keep in mind to screen for CHICKV infection as well. As the prevalence of CHICKV is very low in Bhagalpur, history of the patient staying outside Bhagalpur like in Delhi, Maharashtra, Karnataka will make us more wise to investigate these cases for CHICKV. Another important aspect of interest is that *Aedes Aegypti* is the vector for Dengue also, so in proven Dengue cases too, investigation must be carried out rule out CHICKV infection. As *Aedes Aegypti* is a day hunter personal protection like wearing full shirts, full pants keeping the working place mosquito free, using mosquito repellent cream are essential.

**REFERENCES:-**

- (1) Bandyopadhyay B,Pramanik N,De R,Mukherjee D,Mukherjee H,et al(2009) Chikungunya in West Bengal.Trop.Doct.39:59-60
- (2) Suryawanshi SD,Dubey AH,Khadse RK,Jalgaonkar SV,Sathe PS et al(2009) Clinical profile of chikungunya fever in patients in a tertiary care centre in Maharashtra India.Indian J Med Res 129:438-41
- (3) Shah KV,Gilotra SK,Gibbs CJ,Roseboom LE(1964)Laboratory studies of transmission of chikungunya virus by mosquitoes a preliminary report. Indian J Med.Res.52:703-9.
- (4) Rao TR,Singh KRP,Parvi KM(1964)Laboratory Transmission of an Indian strain of chikungunya Virus.Curr.Sci.33;235-6
- (5) Kumar NP,Joseph R,Kamraj T,Jambulingam P(2008)A226V mutation in virus during the 2007 chikungunya outbreak in Kerala.India J Gen. Virol 89;1945-8
- (6) Sudeep AB,Parashar D(2008)Chikungunya an overview.J.Biosci.33;443-9
- (7) Santosh SR,Dash PK,Parida M,Khan M,Rao PV(2009)Appearance of E1:A226V mutant chikungunya virus in coastal Karnataka,India during 2008 outbreak VirolJ 6:172
- (8) Schwartz O,ALBERT ml(2010) Biology and pathogenesis of chikungunya virus. Nat.Rev.Microbiol.8:491-500.