

## Psychiatric Symptoms in Patients with Chikungunya Fever

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### Editorial

The Chikungunya virus (CHIKV) is an alphavirus transmitted by infected *Aedes* mosquitoes (*albopictus* or *aegypti* species), which have led to major outbreaks in the South Hemisphere in the last decade. The virus was first described in Tanzania in the 1950s. After a few outbreaks in the 1960s and 1970s in Asia and Africa, the virus emerged in 2005 and spread throughout the Indian Ocean. Since 2014, more than a million cases have been reported in the Americas and in the Caribbean. The name Chikungunya derives from a word in the Kimakonde language, meaning 'to become contorted', describing the bent posture of the patients due to severe joint pain [1]. In Brazil, the first cases were reported in 2014, with exponential growth in the number of suspected cases each year [2].

The incubation period of the clinical disease is relatively short—typically from two to ten days. The clinical presentation starts with high fever, which can last up to one week. The fever usually precedes a maculopapular rash over the trunk and extremities, headache, myalgia and arthralgia [1]. The disease was first considered self-limited, but there has been growing evidence of severe manifestations such as uveitis, myocarditis, meningoencephalitis, Guillain-Barré syndrome, and cranial nerve palsy [3]. In Brazil, however, there has been evidence that neurological symptoms resulting from infection by the Chikungunya virus are not rare, as previously believed [4]. Report on psychiatric manifestations due to Chikungunya virus infection include: insomnia, aggressiveness, pessimism, loss of concentration, depression, and mental confusion [5]. In a study carried out in India, almost 60% of the patients presented anxiety disorder or depressive episodes [6].

The scientific literature has abundant evidence that viral infections cause significant global morbidity of the nervous system, as the ones caused by HIV, rabies virus, Japanese encephalitis virus, herpes simplex virus, varicella zoster virus, cytomegalovirus, dengue virus, zika virus, and chikungunya virus, which infect millions of people of all ages.

Arboviruses are viruses transmitted by arthropods (Arthropod-Borne Viruses). This term is used not only because the viruses are carried and spread by arthropods, but mainly for the fact that part of their replication cycle occurs in insects and that it is transmitted to human beings by the bite of hematophagous arthropods [7]. There are at least 135 arboviruses known to cause disease in the human being [8]. International travel and business have helped spread the arboviruses, increasing the range of its geographical distribution and causing a significant impact on public health all over the world [8]. The Dengue, Zika and Chikungunya viruses are the main pathogens transmitted by mosquitoes, representing a threat to human health in many regions of the world.

Psychiatric complications due to viral infections have been described before, mainly with the dengue virus, with studies showing

that most patients had symptoms of anxiety and depression [9,10]. Just like the Chikungunya virus infection, dengue infections also present neurological manifestations such as encephalopathy, delirium and paraparesis, with recent evidence of dengue virus isolation from the brain tissue [9]. In relation to the Zika virus, studies have shown to amuse a temporal association between the Centralni of the calculated cases and microcephaly of Guillain-Baker syndrome and the characteristic of Zika virus [11].

However, there are no precise estimates of morbidity for most of the infections, and there is little information about the pathogenesis of the central nervous system injury in such infections [12]. Without knowledge of the pathogenesis, it becomes difficult to plan interventions to prevent or reduce injuries to the nervous system.

Therefore, there is an urgent need for the development of research for better understanding of the pathogenesis of such diseases in the nervous system. Also important is the development of techniques for early diagnosis and treatment, besides interventions to prevent infections, such as the development of vaccines.

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