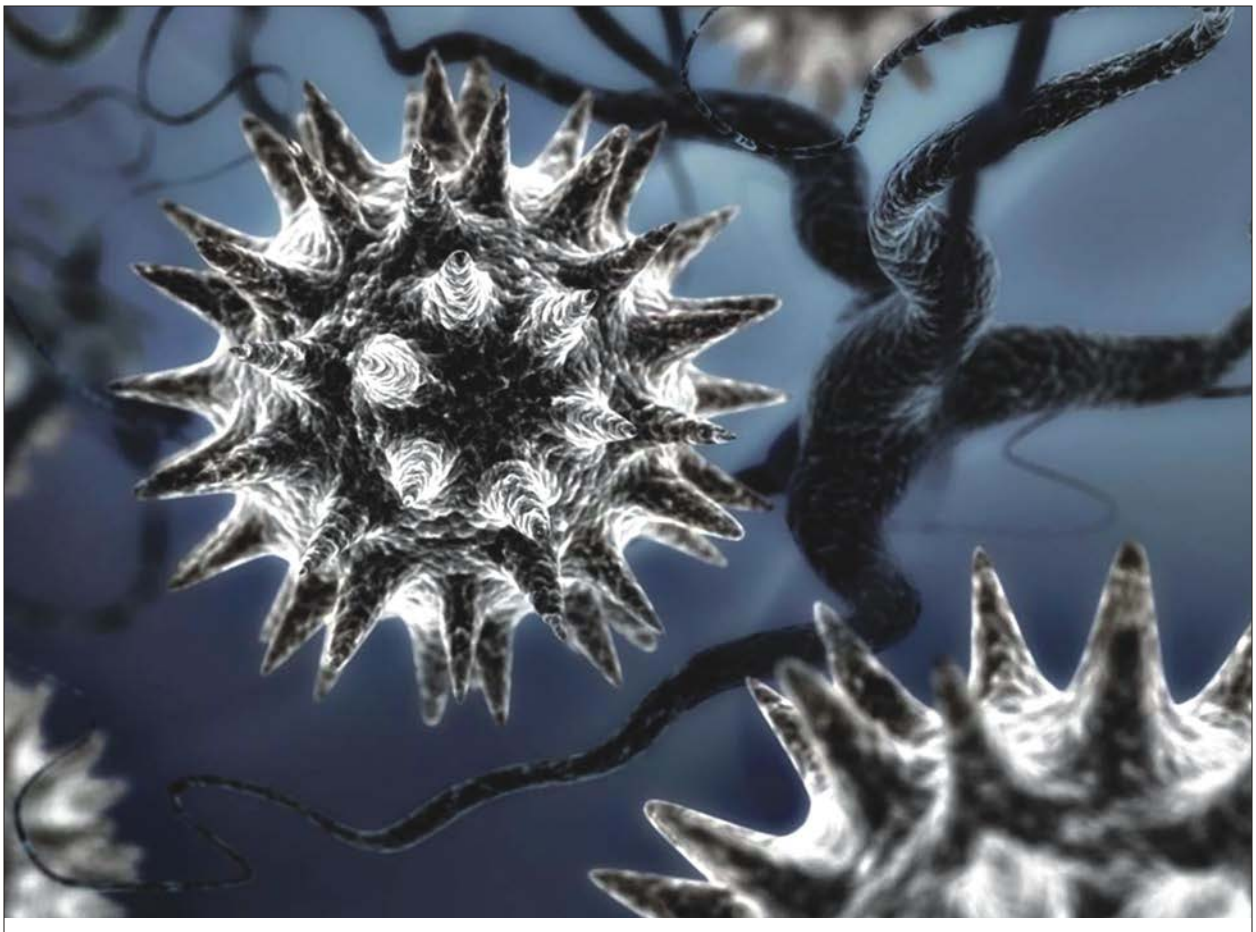

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A Case Report of Classical Chikungunya Fever

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ABSTRACT

The present case discusses about an elderly gentleman who contracted the disease following a visit to area reported to have chikungunya outbreak in Malaysia. He had severe, incapacitating arthralgia and swelling of both hands and elbow joint as well as rash and high grade fever. His serum was tested for both dengue and chikungunya fevers as the symptoms of both the cases were overlapping. In the present case some classical clinical features such as fever, arthralgia and rash were noted. Laboratory result revealed positive for chikungunya IgM on day 5 of illness. Laboratory confirmation is essential to ensure correct diagnosis of chikungunya.

Key words: Chikungunya fever, arthropod borne, arthralgia, myalgia, IgM

INTRODUCTION

Chikungunya fever is an arthropod borne virus disease has emerged as the new emerging infectious disease during the past few years. It has been reported to cause outbreaks in many countries of Asia, Africa, Europe and America. The first outbreak in Malaysia was reported in the year 1998, later on an epidemic of the Chikungunya fever occurred which affected 51 people (Lam *et al*., 2001).

DESCRIPTION OF CASE REPORT

Mr. A.G was a 78-year-old Malay gentleman with background medical history of diabetes mellitus and hypertension reported to University Kebangsaan Malaysia Medical Centre in November, 2008. He was admitted to emergency department following three days history of high grade fever, chills and rigors associated with severe arthralgia and myalgia. The arthralgia affected his hands, elbows and knee joints with slight swelling on both hands. The joint pain was very disabling and he was unable to walk without assistance. He also had poor appetite and vomiting. On the day of admission, he also noted rash on his chest and upper limbs. He had a history of traveling to Malacca, Malaysia one week before where he listened some of his relatives suffered from chikungunya fever. Clinical examination showed tenderness on metacarpal joints, elbow joints and knee joints. Swelling was noted both hands. Maculopapular rash was seen on his torso, upper limbs and thigh. His liver was slightly palpable and non-tender. Other systemic examinations were unremarkable.

High grade fever persisted for two days and body temperature settled on day 3 of admission. The joints pain and swelling improved slightly but he still complained of pain on walking. The patient serum was sent for serological test on day 5 of illness for chikungunya virus and dengue virus IgM. Chikungunya Serology was performed using The Onsite® Chikungunya IgM Combo test which employs lateral flow chromatographic immunoassay for qualitative detection of IgM-Chikungunya virus. The patient's serum was positive for Chikungunya IgM whilst negative in case of dengue IgM. The patient was then diagnosed as chikungunya fever and given paracetamol as pain relief. He was discharged after 6 days of hospitalization. He attended follow up for his diabetes mellitus on 6 weeks later; he still had been suffering from residual joint pain.

DISCUSSION

Chikungunya fever was reported from Africa and Asia between 1960 and 1982 and after an interval of 20 years it was again reported from different countries (Pardigon, 2009). The first outbreak in Malaysia was recorded in the year 1998 where 51 people were affected (Lam *et al*., 2001).

The patient in this case was infected following visit to Malacca, Malaysia in October 2008. The present case is evidence that still the virus has been prevailing there and that might contributed to the present infection.

The most significant manifestation of chikungunya fever is the severe joint pain that occurs with virtually every clinical case (Fourie and Morrison, 1979). The arthralgia is most commonly symmetrical and peripheral being noted in the ankles, toes, fingers, elbows, wrists and knees. The joints exhibit extreme tenderness and swelling with patients frequently reporting incapacitating pain that lasts for weeks or months. Most infections completely resolve within weeks or months but there have been documented cases of chikungunya fever induced arthralgia persisting for several years (Calisher, 1999). In a rare instance, the rheumatic manifestations resulted in joint destruction before resolution after 15 years (Brighton and Simson, 1984).

Unlike dengue, chikungunya was generally thought to be more benign. However mortality was reported in earlier outbreaks in Reunion and India (Josseran *et al*., 2006). In Malaysia, 2 cases of death due to chikungunya were reported (Chua *et al*., 2010).

The symptoms of infection are quite similar to those caused by many other infectious agents in the endemic areas. One particular difficulty in identifying infection is its overlapping distribution with dengue viruses. It has been postulated that many cases of dengue virus infection are misdiagnosed and in practice the incidence of chikungunya infection is much higher than reported (Carey, 1971).

Diagnosis of chikungunya based on two cardinal signs in acute phase; fever and arthralgia was a specificity of 99.6% and positive predictive value of 84.6% as reported by Staikowsky *et al*. (2009). However, as the clinical manifestations of chikungunya fever resemble those of dengue and other fevers caused by arthropod-borne viruses. Therefore, confirmation of Chikungunya fever should be based on : isolation of virus, molecular methods , detection of IgM , demonstration of rising titre of IgG antibody (WHO, 2008).

Serologic diagnosis can be made by demonstration of fourfold increase in antibody in acute and convalescent sera or demonstrating IgM antibodies specific for Chikungunya virus. A commonly used test is the Immunoglobulin M capture enzyme-linked immunosorbent assay.

There is no specific antiviral agent or vaccine against chikungunya available. Treatment is still supportive, involving rest, proper diet, movement and mild exercise. Combinations with mild pain

relief medication such as naproxen, ibuprofen, acetaminophen and paracetamol may relief the fever and aches. Re-evaluation and closer monitoring is advised in chronic ailments. Chikungunya virus infection provides immunity against the disease.

CONCLUSION

Chikungunya fever is still prevalent in Malaysia sporadically as evidenced by the present case report. Clinically it can be distinguished from dengue fever but laboratory diagnosis is prerequisite for confirmation.

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