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Re-emergence of chikungunya in Sri Lanka: First confirmation of the 2006 outbreak by molecular diagnosis

E D T Perera[1], B Wijesiriwardena[2] , M D Hapugoda[1], K B A T Bandara[1], M Y D Dayanath[1], L C Wellawaththage[1], N K Gunewardena[3], C Hapuarachchi [3] and W Abeyewickreme [1*]
[1] *Molecular Medicine Unit, Faculty of Medicine, University of Kelaniya, Ragama*
[2] *Colombo South Teaching Hospital, Kalubowila*
[3]*Department of Parasitology, Faculty of Medicine, University of Kelaniya, Ragama*

Chikungunya virus infection is clinically similar to many other acute febrile illnesses, such as dengue infection, malaria, west nile fever and leptospirosis. Rapid confirmation of the outbreak by laboratory diagnosis is important to ensure public health safety by appropriate patient management and controlling the disease. Molecular diagnosis by Reverse Transcriptase- Polymerase Chain Reaction (RT-PCR) assists rapid diagnosis. The objective of the present study was to determine the clinical manifestations of chikungunya confirmed patients in Sri Lanka. Venous blood samples and clinical information were collected from 66 chikungunya suspected patients having fever of less than 4 days from different geographical areas in Sri Lanka during the period September 2006 to February 2007. Serum samples were tested for chikungunya RNA by RT-PCR. Amplified products were visualized by agarose gel electrophoresis. Among 66 suspected patients, 51% (34/66) were positive for chikungunya by RT-PCR assay and 55.9% (19/34) were females. All age groups were affected similarly with the mean age of 41 years (range = 4 months to 80 years). Of the PCR positive 34, all had fever with either arthralgia or arthritis or both. Most of them had only pain in the joints without swelling (arthralgia only); 67.6% (23/34) in knee, 55.9% (19/34) in ankle, 50% (17/34) in wrist, 44.1% (15/34) in elbow and 52.9% (18/34) in small joints. Arthritis of ankle joint 35.2% (12/34) was more frequent compared with arthritis of the knee joint17.6% (6/34). PCR positive patients manifested more symptoms compared with PCR negative patients; 85.3% (29/34) headache, 79.4% (27/34) backache, 58.8% (20/34) nausea and 61.8% (21/34) vomiting. Compared with dengue, most of the chikungunya patients did not have dermatological manifestations. This is the first confirmation of the 2006 chikungunya outbreak in Sri Lanka. Some of the patients who had symptoms suggestive of chikungunya, tested by PCR were negative. These patients were probably suffering from other illnesses such as dengue.

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*wabeyewickreme@yahoo.com Tel: 011-2960483