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Chikungunya outbreak in 2008 in Ratnapura district, Sri Lanka – clinical and socio-economic analysis

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Since 2006, Sri Lanka has experienced several outbreaks of chikungunya fever (CHIK) affecting several thousands of people. Today, CHIK has become one of the most important vector-borne diseases in the country. The objective of this study was to analyse the clinical manifestations and socio-economic status among CHIK patients reported from Palledbadda and Godakawela areas in Ratnapura district during the outbreak in February and March 2008. After obtaining the informed written consent, venous blood samples were collected from 80 suspected patients. A medical officer carried out clinical examination of each patient. Clinical information along with socio economic data of the patients was recorded in an interviewer-administered questionnaire. Serum samples were tested for CHIK by a Reverse-Transcription Polymerase Chain Reaction (RT-PCR) assay. Of eighty patients tested, 51% (n=42) were positive for CHIK. All positive patients had fever for less than 5 days duration. Majority of them (95%, n=40) had severe arthralgia with arthritis of small joints of hands and feet (81%, n=34). Moreover, a generalized, Itchy maculopapular rash was present in 78% (n=33) of them. The appearance of skin rash only after 4-5 days of fever was characteristic in the majority of patients. The mean age of positive patients was 38 years and consisted of 48% (n=20) of males. Many (43%, n=18) of them were farmers having a mean monthly family income of Rs. 4867.00. Analysis of educational status revealed that 60% (n=26) of family members had educated up to G.C.E. O/L whereas only 26% (n=12) had completed G.C.E. A/Ls. Twenty eight (67%) positive patients had at least one or more CHIK infected family members in addition. Moreover, 95% (n=40) of them were surrounded by infected neighbours indicating active, intense transmission in the area. According to the results, the most predominant clinical features of CHIK were fever either with severe arthralgia or arthritis of small joints of hands and feet. Skin rash, though characteristic, appeared to develop 4-5 days after the infection. CHIK has mainly affected the most productive labour force in these areas with majority belonging to the middle class farming community with a low monthly income. Hence, the sources of income of the affected families were severely hampered by the CHIK outbreak. Therefore, non-fatal, CHIK may have a negative impact on the socio-economic status of the affected communities. "The staff of the Molecular Medicine Unit, Faculty of Medicine, University of Kelaniya, Dr Richard Perera and the staff of Godakawela Hospital and Dr. Susanth Kariyawasam and the staff of Palledbadda Hospital are acknowledged".

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