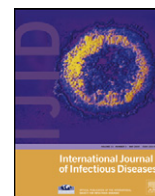




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Letter to the Editor

Vector control versus case isolation for chikungunya

The recently published review on chikungunya virus in Asia (Chikungunya in Southeast Asia: understanding the emergence and finding solutions; Pulmanusahakul et al.¹) reports the current phylogenetic and pathological aspects of the explosive and ongoing re-emergence of this virus across continents.

As explained by Pulmanusahakul et al., as long as a chikungunya vaccine remains a prospect, the prevention of large-scale outbreaks will continue to rely on vector control programs.¹

In this context, measures to contain the spread of the virus should be taken, with the widespread provision of bednets to suspected viremic cases in order to protect them against mosquito bites as quickly as possible. Considering that the *Aedes spp* mosquito is commonly diurnal, it is imperative that any clinical case of chikungunya be isolated under a bednet *all day long*, whether in the medical setting or at home.

This strategy appears relevant and achievable with regard to several mosquito-borne viral diseases, including chikungunya; the case can be made as follows: (1) The fairly high viral load of chikungunya virus in the blood during the first days of infection, as is the case for dengue virus,² increases the risk of a mosquito being contaminated after only a single bite. (2) Considering the lessons from Singapore,¹ no appropriate identification of the main vector species is required for this strategy to be effective. (3) The mandatory isolation of suspected cases under bednets in the early 20th century helped to control yellow fever in epidemic areas such as Havana.³ (4) Reinforcement of nets (insecticide-impregnated curtains, doors and windows screened with insecticide treated nets) in an integrated vector control approach against dengue transmission was proved to limit mosquito bites more efficiently than environmental management alone.⁴ Furthermore, a cluster-randomized trial in Haiti revealed that insecticide-treated bednets have a long lasting effect on reducing the dengue vector populations.⁵ (5) Finally, the World Health Organization recommends the use of bednets to protect primarily those who are sick, but also those who rest during the day in order to limit the spread of the virus.⁶

This complementary action would probably not increase resistance to insecticides significantly.⁷ The cost-effectiveness of the application of this strategy should be evaluated in tropical

and temperate risk areas already equipped with long-lasting impregnated bednets as a priority.

Conflict of interest: No conflict of interest to declare.

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