

Vector-Borne Diseases: Impact of Climate Change on Vectors and Rodent Reservoirs
Berlin, 27 & 28 September 2007

Chikungunya fever – a threat for Europeans

A review of the recent literature

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Background: Chikungunya fever (CHIKF), is a self-limiting illness characterised by fever, headache, weakness, rash and arthralgia. Sometimes the course of the disease is more severe. The virus is transmitted to humans by various *Aedes* species.

Material and methods: Events during the last 2½ years have been dramatic. We were asked by the organizers of this conference to review the recent literature. The majority of the papers were only available on the Internet.

Results: In 2004, Gratz (1)* noted that *Aedes albopictus* (*Aea*) had spread from Asia to Africa, Europe and the Americas. *Aea* is a competent vector for 22 arboviruses incl. chikungunya. According to ECDC (2), *Aea* is now present in several European countries; including Albania, Italy, France, Belgium, Montenegro, Switzerland, Greece, Spain, Croatia, the Netherlands, Slovenia and Bosnia and Herzegovina. A CHIKF epidemic started on Reunion and Mayotte in April and in May there were three autochthonous cases. The epidemic peaked in February 2006 and altogether 266,000 people contracted clinical CHIKF and 254 patients died. The epidemic was over in May 2006. Nine cases were imported to the French territories in West India but they did not lead to any secondary transmission. Through tourism 783 cases were imported to France (3).

Since the start of the Indian Ocean outbreak in 2005, CHIKF has been imported to several European countries, e.g. France (3), Germany (4), Switzerland (5), U.K. (6), Italy (7,8), Norway and Sweden (our unpublished observations).

Beltrame (7) and Fusco (8) described several cases imported to Italy and noted that the ongoing epidemic abroad was a risk for introducing the virus to Italy as the vector *Aea* is widespread there. This was what happened recently (9). A person from a CHIKF endemic area fell ill with a CHIKF compatible disease after arriving in a village in Italy June 21. In August 2007 there was an unusually high number of cases of febrile illness in the village. Investigations confirmed the diagnosis of CHIKF. The virus was also detected in *Aea*. As at 4 Sept a total of 197 cases had been reported.

Discussion

CHIKF is a threat for Europeans travelling to endemic areas, which is a nuisance that may be managed. Even worse is that CHIKF may have established a bridgehead in Italy, which may add a new disease of public health concern in Europe.

* The reference list may be obtained by request or at the poster in the congress.

