Joint UKBTS Professional Advisory Committee (1)

Position Statement

Chikungunya Virus

July 2021

Approved by: Standing Advisory Committee on Transfusion Transmitted Infections

Background

Chikungunya was first described in Tanzania in 1952. The name is derived from a local Tanzanian word meaning 'that which bends up', a reference to the stooped posture many patients develop as a result of painful inflammation of the joints commonly associated with the disease.

Chikungunya is a self-limiting febrile illness caused by an alpha virus spread by the same day-biting mosquito as dengue (usually of the Aedes species). It is characterized by arthralgia or arthritis typically in the knee, ankle and small joints of the extremities, which may be persistent, high fever, followed by a maculopapular rash. Buccal and palatal lesions can occur as may nausea and vomiting. Thrombocytopenia may be present leading to bleeding, especially in children. Rarely there may be fulminant liver failure and death. It is known from antibody studies that many infections are asymptomatic. Immunity is long lasting. The virus is known to infect humans, primates, other mammals and birds. There is no evidence of person-to-person transmission except through blood transfer. At present the only treatment available is symptomatic. No vaccine is available.

Although it is possible that chikungunya could be transmitted by transfusion, or by tissue or organ transplantation, the Standing Advisory Committee on Transfusion Transmitted Infections is not aware of any proven instance of transmission by these routes.

Until recently chikungunya had usually occurred in Africa and South and East Asia, but affected areas have been increasing in recent years. In late 2004, large outbreaks of chikungunya fever in the Indian Ocean, including Reunion, Mauritius and the Seychelles, raised serious public health concerns. Commencing in 2011, countries and territories in the Pacific Island Region have also reported a number of chikungunya outbreaks.

In December 2013 islands in the Caribbean started reporting confirmed cases of chikungunya. By 2014 cases were being reported among U.S. travellers returning from affected areas in the Americas and local transmission was identified in Florida, Puerto Rico, and the U.S. Virgin Islands; surveillance for chikungunya infections was enhanced in the region and continues. Since 2014 only one locally acquired case, in Texas in 2015, has been identified in continental USA. Chikungunya is now well established in Central and South America and the islands of the Caribbean and local transmission has been identified in 45 countries or territories throughout the Americas with more than 1.7 million suspected cases reported. Brazil represents 94% of the 183 000 cases reported in the Americas and the Caribbean since the beginning of 2017.

Although the virus is widespread across the Americas region, cases are also reported in Asia and Africa. Towards the end of 2020 Brazil, India and Thailand reported the majority of new cases. Across the whole of 2020 the majority of cases were reported in Brazil and Thailand.

Indigenous infection does not occur in the United Kingdom, but a number of cases are reported each year in travellers returning from endemic areas which until recently were mostly acquired in the Indian sub-continent and South East Asia. However, of the 295 cases of chikungunya

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reported in England, Wales and Northern Ireland in 2014, 80% had been acquired in the Caribbean. Case numbers and probable source of infection for 2015 onwards have not yet been published by PHE, but the basic figures are available from ECDC in the Chikungunya Annual Epidemiological Reports. In the years 2015 to 2019 the number of UK cases reported are 106, 169, 104, 59 and 94 respectively; however, fully detailed information on the source countries is not available (ECDC 2019 Chikungunya Annual Epidemiological Report).

The first recognised outbreak in Europe occurred in the northeast of Italy in the summer of 2007; a result of an imported case from India. The vector mosquito has become widespread following importation through international trade. It was first noted in Albania in 1979 and by 2007 has been found as far north as Belgium. In September 2010 there were the first reported cases of indigenous infection in France: two 12-year-old schoolchildren resident in the south of France. Further small outbreaks occurred in the south of France in 2014 (11 cases) and 2017 (17 cases). The largest outbreak in Europe to date occurred in 2017 in central and southern Italy. Of the 277 confirmed cases, the majority were reported in the Lazio region (Rome, Lazio and Anzio) with a smaller focus of infection in Calabria (n=61). No autochthonous chikungunya cases have been reported in the EU/EEA since 2017.

The overall figures for 2019 for Europe (ECDC Annual Epidemiological Report for 2019, most recent report) identified 421 confirmed cases, all travel related. France reported the highest number of cases (21%), followed by the UK (18%) and Germany (17%). The probable country of infection was available for 397 of the 421 cases, and these had probably acquired their infection in 36 different countries. The majority in Asia (78%), mainly Thailand (62%), India (13%) and Myanmar (13%).

Information about international outbreaks of chikungunya is available on the National Travel Health Network and Centre (NaTHNaC) website: https://travelhealthpro.org.uk

Visitors to some chikungunya affected areas will be excluded from donation for four months under current malaria guidelines. Visitors to chikungunya affected areas which are not subject to longer deferral periods because of the presence of other infectious agents, should not donate blood or tissues for four weeks from their return to the UK if they have had no symptoms suggesting that they may have been infected with chikungunya or for six months from their return if they have been diagnosed with chikungunya or had symptoms which may be suggestive of chikungunya infection.

Countries affected by chikungunya and any applicable time limits are shown in the Geographical Disease Risk Index (GDRI) and any associated Change Notifications.

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