Chikungunya

Traveler Summary

Key Points

- Chikungunya is a viral infection acquired through the bite of day-biting mosquitoes, mainly in tropical Africa, Asia, Central and South America, and the Caribbean.
- Risk is high for travelers going to affected countries, especially in urban areas with poor sanitation and mosquito breeding sites near human habitation.
- Symptom onset is sudden, mainly with fever and severe joint pain; headache, muscle aches, weakness, and rash may occur.
- Consequences of infection include chronic, recurrent joint pain in 20% of people; rarely, inflammation of the brain, heart, or liver occurs.
- Prevention includes wearing long sleeves and long pants, as well as observing personal protective measures against mosquito bites.
- Chikungunya vaccine (IXCHIQ) is given as a single dose to persons 18 years and older.
- Vaccine side effects are most commonly injection-site reactions, headache, fatigue, and muscle aches.
- The duration of protection is at least 2 years; the need for a booster dose has not yet been determined.

Introduction

Chikungunya is a viral infection transmitted by the bite of day-biting mosquitoes in tropical countries, resulting mainly in sudden fever and severe joint pain. Chikungunya is sometimes confused with dengue or Zika, which also causes fever, rash, and muscle and joint pain.

Risk Areas

Chikungunya is historically common in tropical Africa, the Indian Ocean area, Asia, Central and South America, and the Caribbean. A widespread epidemic in the Caribbean Islands and contiguous Central and South America (between 2013 and 2016) resulted in over 2 million cases from more than 40 countries and territories, including hundreds of cases imported into North America and Europe. As of May 2023, more than 110 countries and territories have documented chikungunya, including hundreds of cases imported into North America and Europe. Approximately 90% of the cases reported from the Americas through 2022 occurred in Brazil. In early 2023, Paraguay (and Argentina to a lesser degree) experienced significant outbreaks.

Transmission

Chikungunya virus is mainly transmitted through the bite of day-biting mosquitoes (***Aedes aegypti*** and ***Aedes albopictus***). ***Aedes*** mosquitoes usually bite during the day, with 2 peaks of biting activity: the first 2 to 3 hours after dawn and the mid-to-late afternoon hours. However, when indoors or during overcast days, the mosquitoes bite all day.

Risk Factors

Chikungunya is relatively common in travelers going to endemic areas, especially for those residing in urban areas where sanitation is poor, where ***Aedes*** mosquito breeding sites (such as discarded tires, flowerpots, and blocked rain gutters) are numerous, or in unscreened buildings.

Symptoms

Symptoms commonly develop about 3 to 7 days (range: 1-12 days) following an infective bite and include sudden onset of fever and severe joint pain. The fever may decline for 1 to 2 days then reoccur. Peripheral joints (hands, wrists, ankles, knees, spine, shoulders, feet, and elbows) are most affected with pain. Other symptoms include headache, muscle aches, weakness, chills, and gastrointestinal symptoms. Approximately half of infected persons develop a rash on the trunk and limbs. Most people recover from the acute illness within 7 to 10 days, but symptoms may persist for weeks to months.

Consequences of Infection

After a year, more than 20% of patients still suffer recurrent joint pain. Serious illness rarely occurs, but complications can include inflammation of the brain, heart, or liver; kidney damage; and bleeding. The death rate is low for most persons but is increased in those older than 65 years or with underlying disease.

Need for Medical Assistance

Travelers do not usually require medical assistance because most chikungunya infections resolve spontaneously over a few days; serious complications are very rare. Taking paracetamol (acetaminophen) may help relieve symptoms. Because febrile illness in the tropics can be due to other serious diseases (such as malaria, dengue, or Zika virus infection), travelers with persistent fever should see a health care professional when possible.

Prevention Strategies

Nonvaccine

Personal protective measures are the main prevention strategy.

Mosquitoes that transmit chikungunya virus (***Aedes*** spp.) can bite throughout the day but have peak biting activity in the early morning and late afternoon and evening. Travelers should be especially vigilant in applying repellent during peak biting activity times. Treat outer clothing, boots, tents, and sleeping bag liners with permethrin (or other pyrethroid) when traveling in a very high-risk area for chikungunya.

Additionally, containers with stagnant water can serve as breeding sites for mosquitoes and should be removed from the proximity of human habitation whenever possible. See ***Insect Precautions***.

Vaccine

An injectable vaccine (IXCHIQ) is available and approved for persons 18 years and older. Vaccination is ***recommended*** for travel to countries experiencing a chikungunya outbreak and may be ***considered*** for travel to countries with a history or presumed risk of transmission.

Side Effects

The most common vaccine side effects are injection-site reactions, headache, fatigue, and muscle pain.

Timing

Chikungunya vaccine is given as a single dose injection. Duration of protection is at least 2 years; the need for a booster dose has not yet been determined.