

GENERAL INFORMATION ON CHIKUNGUNYA

Symptoms and signs

- The majority of individuals bitten by a mosquito infected with chikungunya virus (CHIKV) will present with symptomatic disease after an incubation period of 3 to 7 days (range 1 to 12 days).
- Patients usually present with abrupt onset of fever typically greater than 102°F (39°C) and severe polyarthralgia.
- Other signs and symptoms may include headache, diffuse back pain, myalgias, polyarthritides, rash, conjunctivitis, nausea and vomiting.

Physical examination

- **Fever** can be continuous or intermittent, and occasionally may be associated with relative bradycardia.
- **Joint symptoms** are usually symmetric and most commonly occur in hands and feet but they can affect more proximal joints. Swelling can also be seen and is often associated with tenosynovitis. Patients are often severely incapacitated due to pain, tenderness, swelling and stiffness.
- **Rash** usually occurs 2 to 5 days after onset of fever in approximately half of all patients. It is typically maculopapular, involving the trunk and extremities, but can also include palms, soles, and face. The rash can also present as a diffuse erythema that blanches with pressure. In infants, vesiculobullous lesions are often the most common skin manifestation.

Clinical course

- CHIKV can cause acute, subacute and chronic disease.
- Acute symptoms typically resolve within 7–10 days.
- Some patients might have relapse of rheumatologic symptoms 2 to 3 months after acute illness, including distal polyarthritides, exacerbation of pain in previously injured joints and bones and subacute hypertrophic tenosynovitis in wrists and ankles.
- Chronic disease is defined by symptoms that persist for more than 3 months.
- Maternal-fetal transmission is possible among pregnant women with the highest risk for severe infection in the neonates during the intrapartum period.
- Persons at risk for severe disease include neonates exposed during the intrapartum period, older adults (e.g., > 65 years) and persons with underlying medical conditions (e.g., hypertension, diabetes, or cardiovascular disease)
- Recovery from chikungunya infection usually results in lifelong immunity
- Chikungunya is rarely fatal

DIFFERENTIAL DIAGNOSIS

- In the Caribbean, Chikungunya (CHIK) must be differentiated from dengue fever, which has the potential for much worse outcomes including death:
 - Especially useful in establishing the differential diagnosis are that with CHIK the onset is more acute, the duration of fever much shorter, the maculopapular rash more frequent, and the pain much more pronounced and localized to joints and tendons, in comparison to dengue fever.
 - Shock or severe hemorrhage are very rarely observed in CHIK, whereas dengue virus infection is more likely to cause neutropenia, thrombocytopenia, hemorrhage, shock and death.
 - Co-infection with dengue virus and CHIKV has been documented.
- Other diseases that may be confused with CHIK include leptospirosis, malaria, rubella, and infections with group A streptococcus, enteroviruses and adenoviruses.

DIAGNOSTIC TESTS

- Chikungunya virus can be identified using RT-PCR or viral isolation during the first week of illness.
- Serological diagnosis can be performed by detection of specific IgM antibodies in serum specimen from day 4–5 after the onset of illness, or a four-fold rise of specific CHIKV IgG antibody titre on a pair of sera (acute and convalescent specimens). Specific IgM can persist for many months, in particular in patients with long-lasting arthralgia.

TREATMENT AND PREVENTION

- There is no specific antiviral drug treatment for CHIK.
- Symptomatic treatment during acute disease comprises rest and oral fluids, acetaminophen or paracetamol, and ibuprofen, naproxen, or another non-steroidal anti-inflammatory agent (NSAID).
- In some chronic cases, recovery from CHIK can be prolonged (sometimes up to a year or even more) with persistent joint pain requiring pain management, including long-term anti-inflammatory therapy.
- To prevent the infection of others, acutely infected patients need to be protected from further mosquito exposure during the first week of illness.
 - Use of air conditioning or window/door screens
 - Use of mosquito repellents on exposed skin
 - Wearing long-sleeved shirts and long pants
 - Covering empty standing water from outdoor containers
- Physicians and health care workers who visit CHIK- infected patients should take care to avoid being bitten by mosquitoes by using insect repellent and wearing long sleeves and pants.