

CHIKUNGUNYA

Clinical management in dengue-endemic areas

Clinical findings

- Acute onset of fever and polyarthralgia are the primary clinical findings
- Joint symptoms usually symmetric and often occur in hands and feet
- Other symptoms: Headache, myalgia, arthritis, conjunctivitis, nausea/vomiting, or maculopapular rash
- Lymphopenia, thrombocytopenia, elevated creatinine, and elevated hepatic transaminases are the most common clinical laboratory findings
- Mortality rare but joint symptoms can be severe and debilitating



Edematous polyarthritis
of the hands



Periarticular swelling and
joint effusion in knees



Maculopapular rash in extremities,
including palms

Chikungunya and dengue

- Difficult to distinguish chikungunya and dengue based on clinical findings alone
- Chikungunya and dengue viruses transmitted by the same mosquitoes
- The viruses can circulate in the same area and cause occasional co-infections in the same patient
- Chikungunya virus more likely to cause high fever, severe polyarthralgia, arthritis, rash, and lymphopenia
- Dengue virus more likely to cause neutropenia, thrombocytopenia, hemorrhage, shock, and death
- **Patients with suspected chikungunya should be managed as dengue until dengue has been ruled out**
 - Proper clinical management of dengue reduces the risk of medical complications and death
 - Aspirin and other NSAIDs can increase the risk of hemorrhage in patients with dengue

Clinical and laboratory features of chikungunya virus infections compared with dengue virus infections

| | Chikungunya | Dengue |
|-------------------|-------------|--------|
| Fever (>39°C) | +++ | ++ |
| Arthralgia | +++ | +/- |
| Arthritis | + | - |
| Headache | ++ | ++ |
| Rash | ++ | + |
| Myalgia | + | ++ |
| Hemorrhage | +/- | ++ |
| Shock | - | + |
| Lymphopenia | +++ | ++ |
| Neutropenia | + | +++ |
| Thrombocytopenia | + | +++ |
| Hemoconcentration | - | ++ |

Treatment and clinical management

- No specific antiviral therapy; treatment is symptomatic
- Assess hydration and hemodynamic status and provide supportive care as needed
- Evaluate for other serious conditions (e.g., dengue, malaria, and bacterial infections) and treat or manage appropriately
- Collect specimens for diagnostic testing
- Use acetaminophen or paracetamol for initial fever and pain control
 - If inadequate, consider using narcotics or NSAIDs
 - **If the patient may have dengue, do not use aspirin or other NSAIDs (e.g., ibuprofen, naproxen, toradol) until they have been afebrile ≥48 hours and have no warning signs for severe dengue***
- Persistent joint pain may benefit from use of NSAIDs, corticosteroids, or physiotherapy

*Warning signs for severe dengue include severe abdominal pain, persistent vomiting, mucosal bleeding, pleural effusion or ascites, lethargy, enlarged liver, and increased hematocrit with decrease in platelet count