

In Syndrome

Dengue Fever

- It is also known as breakbone fever, dandy fever or seven-day fever.
- It is a mosquito-transmitted virus and the leading cause of arthropod-borne viral disease in the world.

Etiology:

- It is caused by any of four distinct serotypes (DENV 1-4) of single-stranded RNA viruses of the genus Flavivirus.

Epidemiology:

- Fastest spreading mosquito-borne viral disease globally.

Clinical Features:

The three phases include febrile, critical and recovery.

Febrile phase:

- A sudden high-grade fever of 40 C occurs that usually lasts two to seven days.
- Associated symptoms include facial flushing, skin erythema, myalgias, arthralgias, headache, sore throat, conjunctival injection, anorexia, nausea and vomiting.

Critical phase:

- A temperature of 37.5 C to 38 C or less on days three through seven.
- Associated with increased capillary permeability.
- Heralded by a rapid decline in platelet count & rise in hematocrit.

Recovery phase:

- The gradual reabsorption of extravascular fluid in two to three days.
- Associated with bradycardia.

Warning Signs of Dengue: Abdominal pain, persistent vomiting, clinical fluid accumulation such as ascites or pleural effusion, mucosal bleeding, lethargy, liver enlargement greater than 2 cm, increase in hematocrit, and thrombocytopenia.

Diagnosis:

- Thrombocytopenia
- Leukopenia
- Elevated aspartate aminotransferase.

Criteria for Dengue:

Probable dengue:

- The patient lives in or has travelled to a dengue-endemic area.
- Symptoms include fever and two of the following: nausea, vomiting, rash, myalgias, arthralgias, rash, positive tourniquet test, or leukopenia.

Severe Dengue:

- Dengue fever with severe plasma leakage, hemorrhage, organ dysfunction, impaired consciousness, myocardial dysfunction and pulmonary dysfunction.

Dengue shock syndrome:

- Symptoms include rapidly rising hematocrit, intense abdominal pain, persistent vomiting, and narrowed or absent blood pressure.
- The virus antigen is detectable by ELISA, polymerase chain reaction or virus isolation from body fluids.
- Serology will reveal a marked increase in immunoglobulins.
- A confirmed diagnosis is established by culture, antigen detection, polymerase chain reaction or serologic testing.

Treatment:

- ✓ Depends on the patient's illness phase.
- ✓ Those presenting early without any warning - acetaminophen and adequate oral fluids.
- ✓ Patients with warning signs, severe dengue - initiated on IV crystalloids and the fluid rate is titrated based on the patient's response.
- ✓ Blood transfusion - in case of severe bleeding or suspected bleeding when the patient remains unstable and hematocrit falls despite adequate fluid resuscitation.
- ✓ Platelet transfusion - when platelet count drops to <20,000 cells/microliter and there is a high risk of bleeding.
- ✓ Avoid giving aspirin and NSAID's drugs and other anticoagulants.
- ✓ No antiviral medications are recommended.

Prognosis:

- Untreated severe dengue fever - mortality rate of 10% to 20%.
- Appropriate supportive care reduces the mortality rate to roughly 1%.

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