

In Clinical Pearl

Dengue Fever Management

The dengue viruses are the members of the genus flavivirus.

- Dengue viruses are transmitted by the bite of female Aedes (Ae) mosquitoes.
- Primary or first infection in non-immune persons usually causes Dengue fever. Subsequent dengue infection by different serotype causes more severe illness like Dengue Haemorrhagic fever (DHF)/Dengue shock syndrome (DSS).
- The key manifestations of the DHF/DSS are sudden onset of shock, capillary leakage, haemorrhagic diathesis/ thrombocytopenia occurring at the time of defervescence of fever.
- It manifests as an acute febrile illness of 2-7 days duration with two or more of the following manifestations: Headache, retro-orbital pain, myalgia, arthralgia, rash, haemorrhagic manifestations.
- Criteria for Dengue Haemorrhagic Fever (Warning signs): a). A probable or confirmed case of dengue + plus b). Haemorrhagic tendencies evidenced by one or more of the following 1. Positive tourniquet test 2. Petechiae, ecchymoses or purpura 3. Bleeding from mucosa, gastrointestinal tract, injection sites or other sites 4. Haematemesis or malena. + Plus c). Thrombocytopenia <100000 plus d). Evidence of plasma leakage due to increased vascular permeability, manifested by one or more of the following : 1. A rise in average haematocrit for age and sex $> 20\%$ 2. A more than 20% drop in haematocrit following volume replacement treatment compared to baseline 3. Signs of plasma leakage (pleural effusion, ascitis, hypoproteinaemia).
- Treatment is supportive-Mild Dengue- Bed rest, Antipyretics, Cold sponging, Plenty of oral fluids and juices.
- In patients of DHF Febrile phase Intravenous fluid may be administered if the patient is vomiting persistently or refusing to feed.
- The critical period is during the transition from the febrile to the afebrile stage and usually occurs after the third day of illness.
- Haematocrit determinations are essential guide for treatment. Hematocrit levels reflect the degree of plasma leakage and need for intravenous administration of fluids.
- Haematocrit should be determined daily from the third day until the temperature has remained normal for one or two days.



The Medical **Bulletin**

- Any person who has dengue fever with thrombocytopenia and haemoconcentration and presents with abdominal pain, black tarry stools, epistaxis, bleeding from the gums and infection etc needs to be hospitalized. A rise of haemeoconcentration indicates need for IV fluid therapy. Continuous monitoring of blood pressure, platelet count and hematocrit is required in severe DHF and DS syndrome. IV Fluids, crystalloids, colloids and plasma expanders.
- Internal bleeding should be suspected if the hematocrit is persistently decreasing. Fresh whole blood in small volumes of 10ml/kg/hour should be given for all patients in shock as a routine precaution. Oxygen should be given to all patients in shock.

Dr. Meenakshi Bhattacharya