

- ▶ Dengue fever is an acute illness characterised by fever, myalgia, arthralgia & rash
- ▶ Severe dengue infection - abnormalities in hemostasis, marked leakage of plasma from the capillaries, shock
- ▶ Caused by any 4 serotypes of dengue virus (arbovirus)
- ▶ Vector - *Aedes aegypti*



- ▶ Dengue virus transmitted to humans through bite of female aedes mosquitoes
- ▶ They acquire the virus while feeding the blood of infected person.
- ▶ After an IP of 8-10 days they are capable of transmitting virus.
- ▶ Humans are the main amplifying host.
- ▶ The virus circulates in the blood of infected host for 2-7 days.

PATHOLOGY

- ▶ Presence of virus in tissue mainly leads to hemodynamic alteration with generalised vascular congestion and mast cell recruitment in lungs
- ▶ Variable hepatic involvement has been reported-diffuse hepatitis with midzonal necrosis & steatosis, focal areas of necrosis

CLINICAL MANIFESTATIONS

- ▶ Incubation period-4-10 days
- ▶ Infants & young children present with an undifferentiated febrile illness
- ▶ Classical presentation seen in older children ,adolescents & adult
- ▶ It can be described under 3 phases -
Febrile phase, Critical phase & Recovery phase

FEBRILE PHASE

- ▶ Sudden onset of high grade fever (may last for 2-7 days)
- ▶ Facial flushing ,skin erythema
- ▶ Myalgia,arthralgia,headache
- ▶ Anorexia,nausea,vomiting
- ▶ Child may have sore throat,conjunctival injection
- ▶ positive tourniquet test may be seen

- ▶ Minor hemorrhagic manifestation-
petechiae & mucosal bleed
- ▶ Liver -enlarged and tender from 2-5 days
- ▶ Progressive decrease in WBC & platelet
count

CRITICAL PHASE

- ▶ b/w 3-7 days of onset of fever
- ▶ Bleeding and shock
- ▶ Fall in platelet count
- ▶ Increased PCV
- ▶ Organ dysfunctions-severe hepatitis, encephalitis, myocarditis, severe bleeding

RECOVERY PHASE

- ▶ After 24-48 hrs in critical phase
- ▶ General wellbeing improves
- ▶ Appetite returns
- ▶ Hemodynamic status stabilizes
- ▶ May have rash of **isles of white in the sea of red**
- ▶ Generalised pruritis
- ▶ PCV stabilizes, WBC start to rise
- ▶ Recovery of platelet count take longer duration

Isles of white in the sea of red



LAB INVESTIGATION

- ▶ Low platelet count
- ▶ Rise in PCV
- ▶ Fall in WBC count
- ▶ Serum chemistry
 - decrease in total protein&albumin
 - Increased levels of SGOT ,SGPT
- ▶ X-ray of chest-may show varying degree of pleural effusion- right side/bilateral

- ▶ USG abdomen -ascites ,enlarged gallbladder
- ▶ Others
 - Virus isolation
 - PCR
 - NS1 antigen detection
 - IgM & IgG detection

MANAGEMENT

- ▶ Patients with dengue infection can be
 1. Undifferentiated fever
 2. Dengue without warning signs
 3. Dengue with warning signs
 4. Severe dengue infection

Undifferentiated fever

- ▶ Non specific symptoms
- ▶ Paracetamol for fever
- ▶ Regular monitoring for development of complication

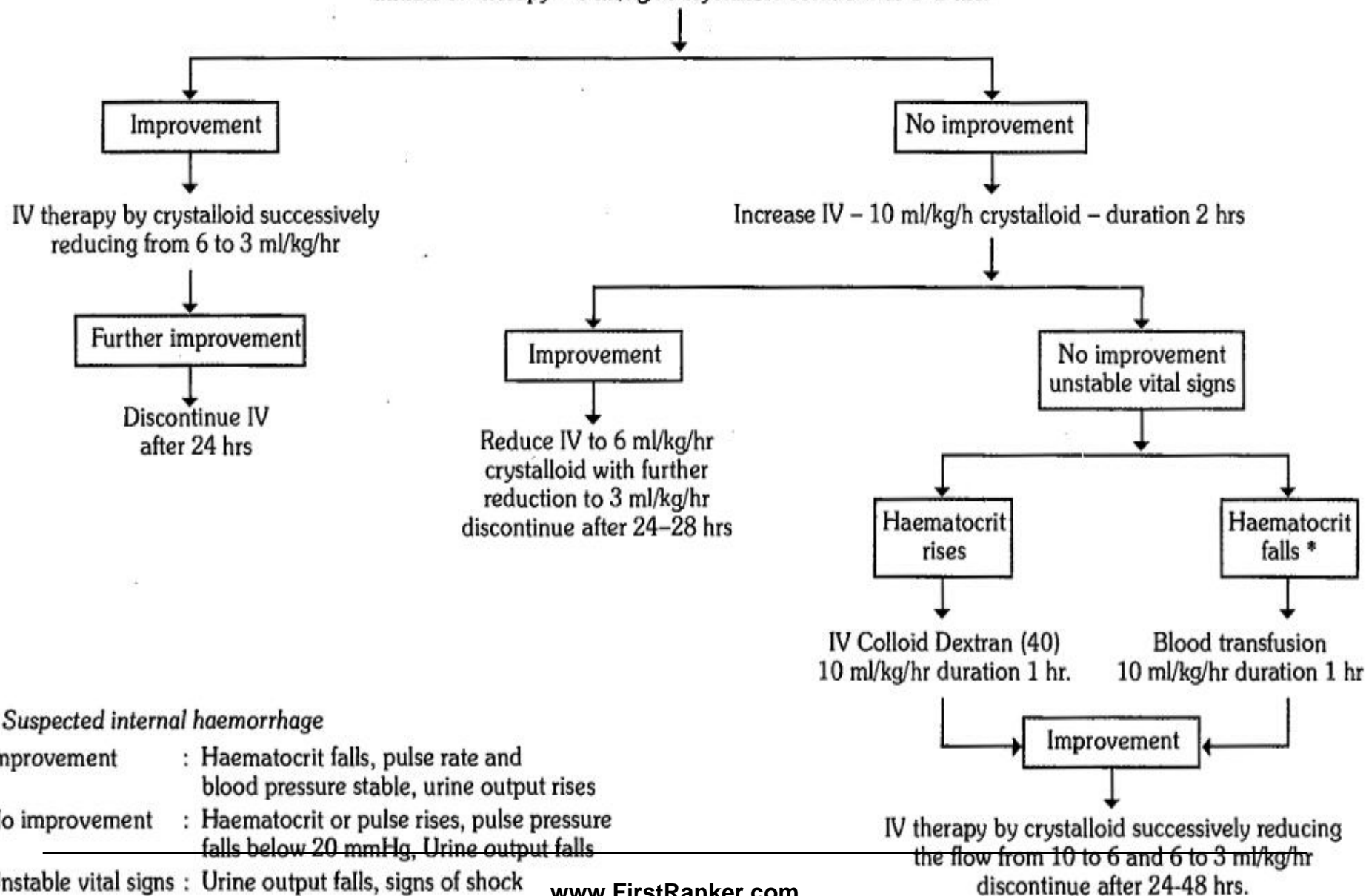
Dengue without warning signs

- ▶ Fever
,bodyache,rashes
- ▶ Paracetamol for fever & bodyache
- ▶ Minor bleeding treated symptomatically
- ▶ Drink plenty of water
- ▶ Monitor the patient

Dengue with warning signs

- ▶ Children with suspected dengue infection who have any of the following needs hospitalization
 - Abdominal pain/tenderness
 - Persistent vomiting
 - Clinical fluid accumulation
 - Mucosal bleed ,lethargy
 - Liver enlargement>2 cm

Initiate IV therapy – 6 ml/kg/hr crystalloid solution for 1–2 hrs.



Severe dengue infection.....

► CRITICAL CRITERIA

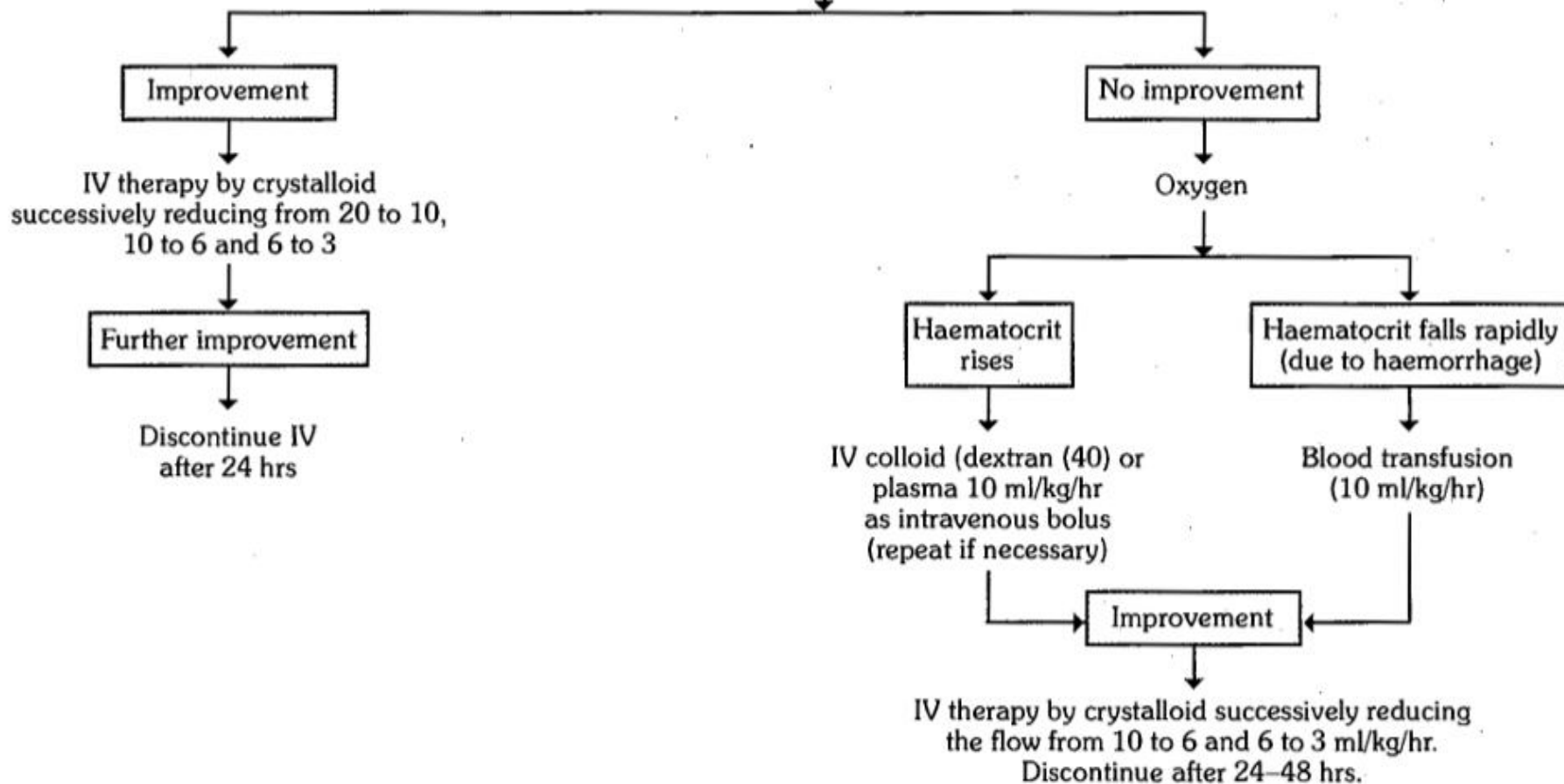
- ✓ a/c onset of high grade fever
- ✓ Hemorrhagic manifestation
- ✓ Tender hepatomegaly
- ✓ Effusion in body cavity/shock

► LABORATORY CRITERIA

- ✓ Thrombocytopenia -1lakh cell/cu.mm
or 1-2 platelet per oil immersion

UNSTABLE VITAL SIGNS
Urine output falls, signs of shock
www.FirstRanker.com www.FirstRanker.com

Immediate rapid volume replacement : initiate IV therapy
10–20 ml/kg/hr crystalloid solution for 1 hour



- Serial platelet and haematocrit determinations : drop in platelets and rise in haematocrit are essential for early diagnosis of DHF.
- Cases of DHF should be observed every hour for vital signs and urinary output.

MANAGEMENT OF BLEEDING

**PETECHIAL SPOT /MILD MUCOSAL
BLEED HEMODYNAMICALLY
STABLE**

- ▶ Bed rest
- ▶ Maintenance of hydration
- ▶ Avoid IM injection & any procedure predispose to mucosal trauma.

**SEVERE BLEED&
HEMODYNAMIC INSTABILITY**

- ▶ Blood transfusion & monitoring
- ▶ If bleeding cannot be managed -fresh frozen plasma ,platelet rich plasma may be considered

SUPPORTIVE CARE

- ▶ Organ dysfunction should be managed
- ▶ Broad spectrum antibiotics - superadded infection
- ▶ Blood transfusion 20ml/kg for shock
- ▶ Monitoring of heart rate ,BP, respiratory rate, pulse pressure