



Standard Treatment Workflow (STW) for the Management of

DENGUE FEVER

ICD-10-A90



SYMPTOMS

Fever and two of the following criteria -

- 1. Nausea
- 2. Vomiting
- 3. Rash
- 4. Myalgia
- 5. Headache 6. Retro orbital pain
- 7. Arthralgia
- 8. Hemorrhagic manifestations

Live in / travel to dengue endemic area

WARNING SIGNS

- Abdominal pain or tenderness
- Persistent vomiting
- Clinical fluid accumulation pleural effusion, ascites.
- Mucosal bleed malena, epistaxis, gum bleed
- Liver enlargement > 2 cms
- Shock (DSS) weak rapid pulse, pulse pressure < 20mm Hg hypotension, cold clammy skin, restlessness.

ASSESSMENT

Dengue without warning signs

Dengue with warning signs

Severe dengue

TREATMENT OF PROBABLE DENGUE **WITHOUT WARNING SIGNS**

- Symptomatic ambulatory treatment
- Paracetamol for fever: avoid **NSAIDs**
- Daily monitoring: clinical, PCV, platelets

SEVERE DENGUE

- Fluid accumulation with respiratory distress
- Severe bleeding
- Impaired consciousness

REASONS FOR REFERRAL

- · Cold extremities. restlessness
- Acute abdominal pain
- Decreased urine output
- **Bleeding and** hemoconcentration
- Rising PCV & thrombocytopenia without clinical symptopms

INVESTIGATIONS

ESSENTIAL

- · Hb, TLC, DLC, Platelets, PCV
- Positive tourniquet test
- NS1 antigen (ELISA method)

DESIRABLE

- Chest X-ray
- · CPK, albumin

· LFT. RFT.

Improvement

RL 3-5ml/kg/hr

fulfilled

 USG abdomen Dengue IgM

OPTIONAL

Improvement

infusion rate

10ml/kg/hr 1-2 hr

7ml/kg for 2-3 hrs

5ml/kg for 2-4 hrs

3ml/kg for 2-4 hrs Stop at 48 hours

Echocardiography

HYPOTENSIVE SHOCK (tachypnea, tachycardia, hypotension, peripheral pulses not palpable)

20 ml/kg crystalloid or colloid in 15 minutes

Assessment of Shock

- · PCR dengue CVP monitoring
- · USG guided measurement of collapsibility of IVC for monitoring hypovolemia

SHOCK

Assess airway, breathing, circulation & start oxygen inhalation

COMPENSATED SHOCK (tachypnea, tachycardia, normotensive) Ringer's Lactate/ NS 10 ml/kg/hr Assess after every hour by checking HR, RR, BP, CVP and PCV No Improvement RL 10-15ml/kg/hr RL 5-7ml/kg/ 1-2hr Assessment at second hour **Further Improvement** No Improvement RL 15ml/kg/hr Continue IV fluids till Assessment at third hour stable for 24 hours Colloids 10ml/kg/hr Once stable, observe for 24 hours, then discharge if the discharge criteria is No Improvement Look for anemia, acidosis,

(monitor HR, RR, BP, PCV and CVP) No Improvement **Gradually decrease PCV Increased PCV** Decreased Colloids 10-20ml/kg **Blood Transfusion**

No Improvement **Improvement** Look for blood loss, acidosis

cardiac dysfunction and treat

accordingly

Assessment

In case of shock, start bolus and arrange for urgent referral with continuous monitoring by a health professional to facilities with a PICU.

INDICATION FOR PLATELET TRANSFUSION & PACKED RED CELLS

PACKED RED CELLS

- · Loss of blood (overt blood) 10% or more of total blood volume.
- Refractory shock

myocardial dysfunction and

treat accordingly

Fluid overload

PLATELETS

- Prolonged shock
- Prophylactic platelet transfusion (PLT <10.000/cumm)
- · Systemic massive bleeding

FRESH FROZEN PLASMA/ **CRYOPRECIPITATE**

Coagulopathy with bleeding

DISCHARGE CRITERIA (ALL OF THE FOLLOWING CONDITIONS MUST BE PRESENT)

CLINICAL

- No fever for 48 hours
- · Improvement in clinical status (check for general well-being, appetite, haemodynamic status, urine output, respiratory distress)

LABORATORY

- · Increasing trend of platelet count
- Stable haematocrit without intravenous

KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES