Dengue Fever

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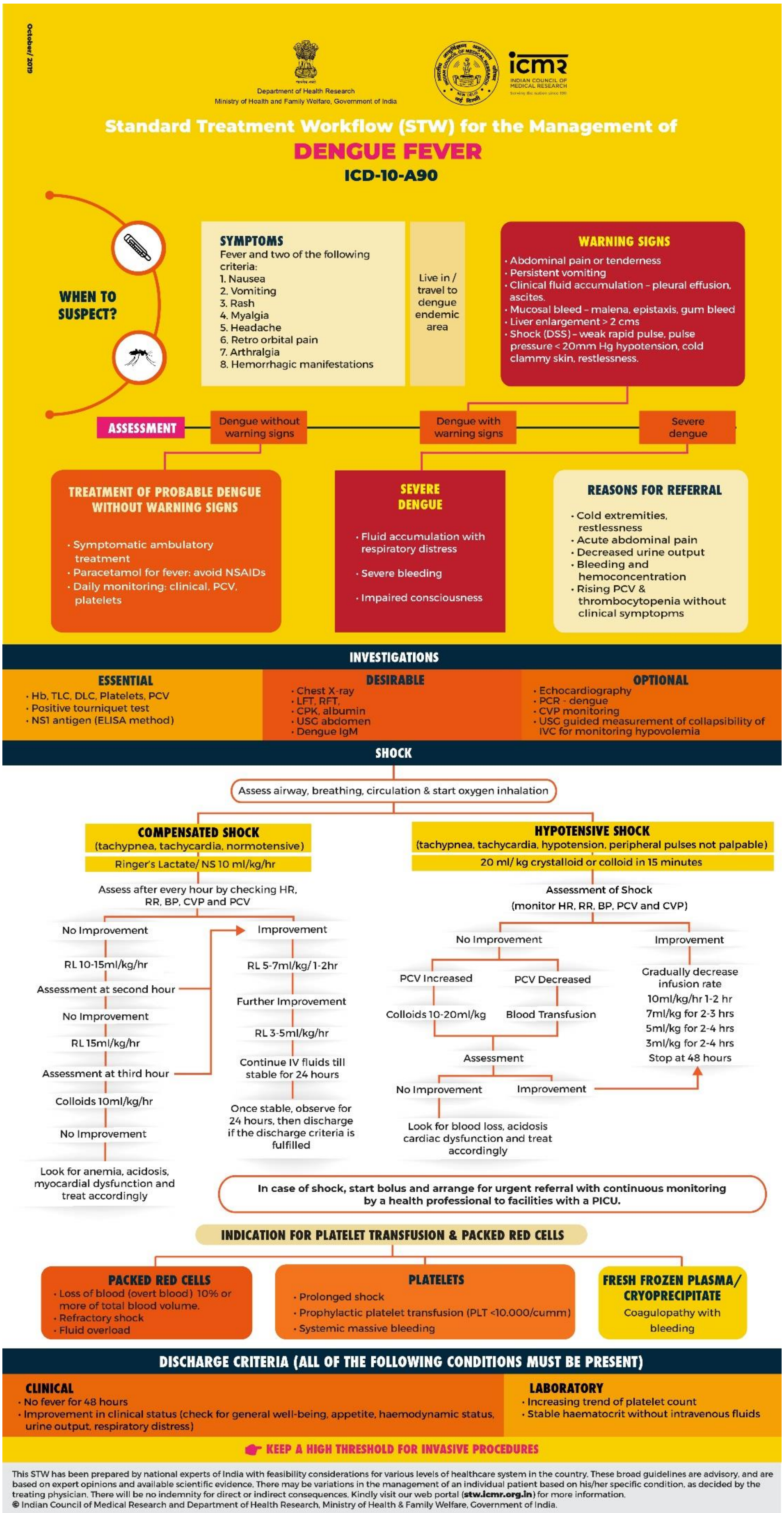
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Standard Treatment Workflow (STW) for the Management of
DENGUE FEVER
ICD-10-A90
WHEN TO SUSPECT?
SYMPTOMS
Fever and two of the following criteria:
1. Nausea
2. Vomiting
3. Rash
4. Myalgia
5. Headache
6. Retro orbital pain
7. Arthralgia
8. Hemorrhagic 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
· LFT, RFT,
· CPK, albumin
· USG abdomen
· Dengue IgM
OPTIONAL
· Echocardiography
· 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
Assessment at second hour
No Improvement
RL 15ml/kg/hr
Assessment at third hour
Colloids 10ml/kg/hr
No Improvement
Look for anemia, acidosis, myocardial dysfunction and treat accordingly
Improvement
RL 5-7ml/kg/ 1-2hr
Further Improvement
RL 3-5ml/kg/hr
Continue IV fluids till stable for 24 hours
Once stable, observe for 24 hours, then discharge if the discharge criteria is fulfilled
HYPOTENSIVE SHOCK
(tachypnea, tachycardia, hypotension, peripheral pulses not palpable)
20 ml/ kg crystalloid or colloid in 15 minutes
Assessment of Shock
(monitor HR, RR, BP, PCV and CVP)
No Improvement
PCV Increased
PCV Decreased
Colloids 10-20ml/kg
Blood Transfusion
Assessment
No Improvement
Improvement
Look for blood loss, acidosis cardiac dysfunction and treat accordingly
Improvement
Gradually decrease 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
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
· 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 fluids
KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES
This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit our web portal (stw.icmr.org.in) for more information.
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