

Pediatric Dengue Patients Monitoring

Varunee Vatcharasaeevee : Registered Nurse Expert Level

Consultant Nurse, Dengue Center of Excellence

Queen Sirikit National Institute of Child Health (Children's Hospital)

Department of Medical Services, Ministry of Public Health, Thailand

Nursing Care in Different Phases of Dengue

1. Febrile phase
2. Critical phase
3. Convalescence phase

Febrile Phase (PLT count $>100,000 /\text{mm}^3$)

Problem

- High fever, headache, retro-orbital pain, arthralgia
- Anorexia, nausea, vomiting
- Abdominal pain
- Bleeding
- Thrombocytopenia/ HCT rising

Nursing Care in Febrile Phase (I)

Fever Reduction

- Check/Record Temp, PR, RR and BP q 4-6 h
- Place tepid sponges at forehead, armpits and extremities
- Lukewarm shower or bath for older children, adolescence and adults
- Give acetaminophen 10 ml/kg/dose
- Encourage oral fluid and avoid plain water
- Provide quiet environment

Vital signs : Temp, PR, RR, BP q 4-6 h



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THAILAND

Nursing Care in Febrile Phase (II)

Headache/Retro-orbital pain/Myalgia/Arthralgia

- Record pain score q 8 h
- Give medication according to doctors' order
- Cold compress
- Provide adequate rest for the patients
- Advise caregiver to understand pain control and improve their ability to provide comfort with emotional support

Nursing Care in Febrile Phase (III)

Anorexia/Nausea/Vomiting

- Record vomiting (number, amount, contents)
- Look for signs of dehydration e.g. dry lips, crying without tears, sunken eyeballs, fair/poor skin turgor, rapid pulse etc.
- Notify doctors if there are signs of dehydration due to the patients may need intravenous fluid.
- Give medicines according to doctors' orders
- Provide clean containers for vomit
- Provide clean water for goggling mouth after vomiting

Nursing Care in Febrile Phase (IV)

Abdominal pain

- Help patients lay down in comfortable position
- Avoid to contact abdomen
- Provide comfortable wears
- Aware of possible GI bleeding as peptic ulcer is common in adolescents and adults
- Abdominal pain may be early sign of shock

Nursing Care in Febrile Phase (V)

Bleeding

- Observe bleeding: epistaxis, menstruation, melena, etc
- Notify doctor, estimate and record blood loss [$>10\%$ total blood volume or 6-8 ml/kg (children) or 300 ml (adults)] as blood transfusion is needed.
- Avoid invasive procedures
- No intramuscular injection
- Stop bleeding (if possible)

Nursing Care in Febrile Phase (VI)

Diet and Fluid

- Record oral fluid intake and urine output
- Recommend soft diet and avoid red, black or brown food and drinks
- Encourage ORS 3-5 ml/kg/h, if patients take less than half of normal diets
- Provide IV Fluid in case of moderate to severe dehydration

Critical Phase (PLT count $<100,000 /\text{mm}^3$)

*Major complications in severe disease of dengue
(DHF/severe dengue)*

- Plasma leakage (24-48 h)
- Bleeding
- Shock
- Abdominal pain
- Hypoxia
- Decrease urine volume

Nursing Care in Critical Phase (I)

Plasma leakage (24-48 h)

- Record clinical signs & symptoms q 4-6 h
- Check vital signs T q 4-6 h, BP, PR, RR q 1-2 h
- Check HCT q 4-6 h
- Record I/O
- Encourage oral intake
- IV fluid care



Nursing Care in Critical Phase (II)

Shock/Impending shock

- Notify doctors, encourage ORS/consider IV fluid
- Record time of shock
- Monitor vital signs (PR ,RR, BP) q 15 min until stable
- On oxygen therapy
- Check HCT/CBC

Nursing Care in Critical Phase (III)

Nursing Care for Shock

- Shock grade III (compensated shock)
- Shock grade IV (profound shock/decompensated shock)



Nursing Care in Critical Phase (IV)

Need to Notify for Prevent Prolonged Shock and Multiple Organs Failure

- Consciousness, pupil, GCS
- Urine out put
- Lab results: HCT, Coagulogram, BUN, Cr, Electrolyte, LFT, BG, BS etc.
- Family concern



Nursing Care in Critical Phase (V)

Hypoxia (SaO₂ <95%)

- Provide oxygen therapy
- Observe respiration and skin perfusion
- Notify doctors for additional laboratory investigations (blood gas and electrolytes)

Nursing Care in Critical Phase (VI)

Fluid Overload: Hyper-volemia/Hypertension/

Dyspnea/Tachypnea

- Observe signs of fluid overload
- Notify doctors if High/Low BP
- On oxygen
- Put patients on Fowler's position
- Decrease/Stop IV fluid according to doctors' orders
- Give medication



Nursing Care for Patients with Blood Transfusion (I)

- Give blood transfusion according to doctor's order
- Check blood group, amount and identification card
- Warm blood, soak the bag of blood in the ordinary water container at room temperature for 15 min
- Blood should be given within 30 min after getting from the blood bank.
- If transfusion is delayed for >30 min, return back to the blood bank

Nursing Care for Patients with Blood Transfusion (II)

- Observe transfusion reactions: headache, vertigo, restless, nausea/ vomiting, chill, chest discomfort within 15 min
- During blood transfusion, do not push any medications include 5%D/W or Ringer's solution at the same IV site
- If necessary, only NSS can be pushed before and after medications

Important Clinical and Lab Parameters Needed to Notify in Critical Phase

- Decrease fever, but rapid pulse
- Dyspnea/tachypnea : keep $\text{SaO}_2 \geq 95\%$
- Monitor Hct q 4-6 hr, if Hct $\geq 10\%$ /higher/lower than normal scale
- Significant bleeding : hemoglobinuria, hematuria, hypermenorrhea
- Urine output $<0.5/>2$ ml/kg/h

Nursing Care in Convalescence Phase (I)

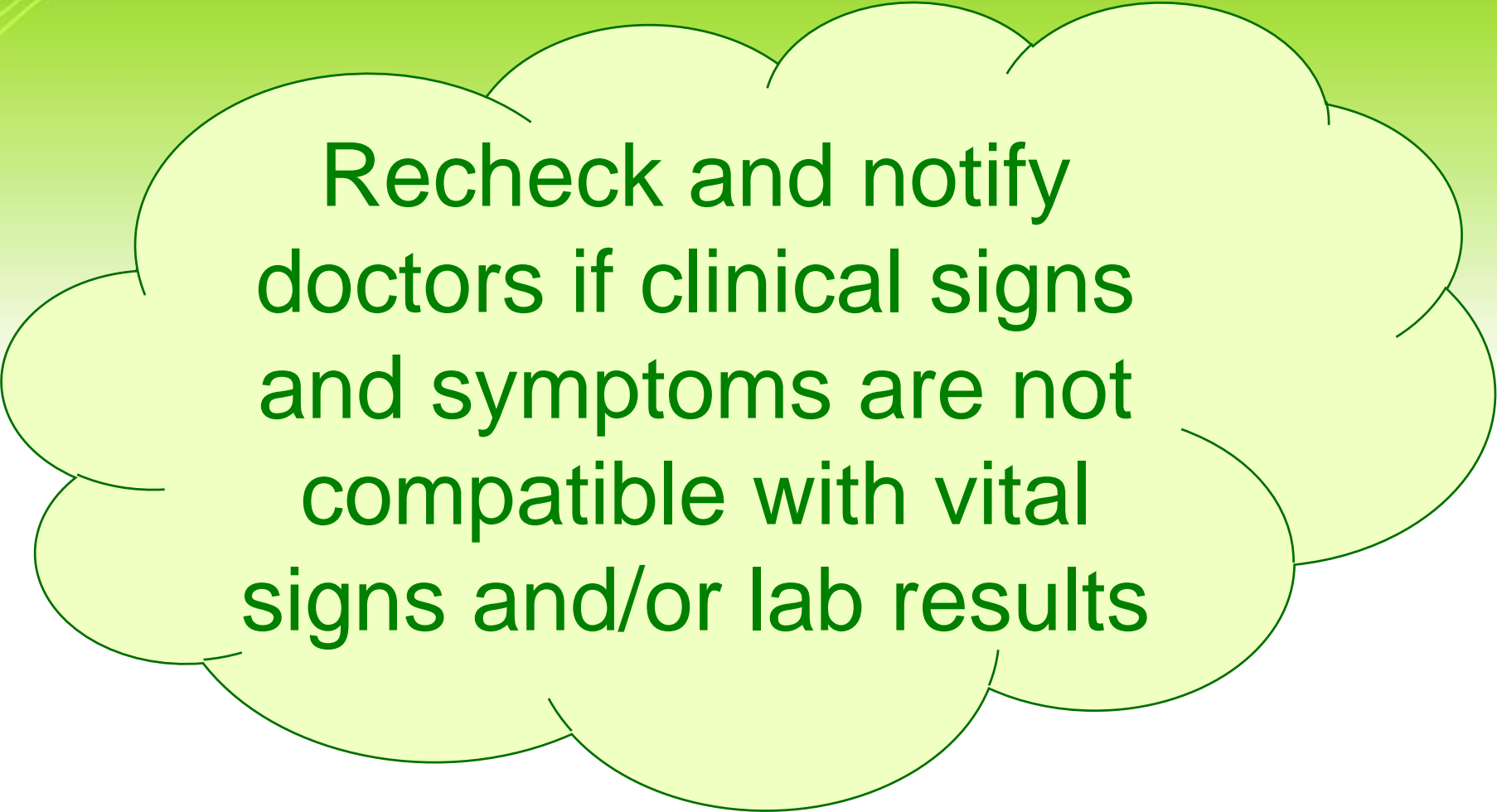
- Record vital signs q 4-6 h
- Observe signs of recovery: convalescence rash, itching, increased appetite, bradycardia (pulse rate $<60/\text{min}$)
- Observe signs of fluid overload (puffy eyelids, marked abdominal distention, tachypnea, dyspnea, cough, abnormal lung signs, wide PP (narrow pulse pressure esp. in obese patients), rapid and strong pulse, urine $> 2 \text{ ml/kg/h}$)

Nursing Care in Convalescence Phase (II)

Itching with or without Convalescence rash

- Rash : good sign of recovery
- Advise not to scratch
- Keep clean and dry skin
- Use talc powder/calamine lotion
- Give antihistamine (if necessary)





Recheck and notify
doctors if clinical signs
and symptoms are not
compatible with vital
signs and/or lab results

Thank you for your attention



Varunee Vatcharasaeevee, QSNICH,
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