05-0817 – Pediatric Shock - Non-Traumatic

Authority

Health and Safety Code Division 2.5, California Code of Regulations, Title 22, Division 9

Definition

Inadequate tissue perfusion to meet metabolic needs in a neonate, infant or child.

History

May include GI bleeding, vomiting, diarrhea, allergic reaction, and sepsis.

Physical signs

May include collapsed peripheral and neck veins, confusion and irritability, cyanosis, pale, cold and clammy, mottled skin, rapid respiration, and anxiety.

Precautions

1. Children may compensate in a shock state for an extended period of time and then suddenly decompensate.
2. A decreased blood pressure may be a late sign of shock.
3. Do not delay transport for multiple IV attempts, use IO instead.

Treatment - BLS

1. Monitor and if needed secure the airway.
2. Oxygen: as appropriate, goal to maintain pulse oximetry at least 94%.
3. Assist respirations as needed.
4. Monitor the vital signs frequently.
5. Check the blood sugar and treat as appropriate. For EMR providers if the patient is a diabetic then ask the parents/caregivers to check a blood glucose reading immediately.
6. Keep the patient warm.
7. Keep patient warm and give nothing by mouth.

Treatment - ALS

1. Cardiac monitor and treat dysrhythmias as indicated per appropriate PALS/ACLS guidelines.
2. Capnography: utilize waveform capnography, ETCO2 reading of 25 mm Hg or less are suggestive of poor organ perfusion and potentially sepsis.
3. Establish two IVs if possible. If unable to establish peripheral IV access, proceed rapidly to IO insertion.
4. If patient is hypotensive, according to length-based assessment tape administer 20 ml/kg bolus. Then repeat with 10 ml/kg bolus up to a 40 ml/kg has been given.
5. Use warmed fluids if available.
6. For hypotension not responsive to fluid resuscitation use Push Dose Epinephrine.
7. PUSH DOSE EPINEPHRINE – 5 mcg to 10 mcg (0.5 ml to 1 ml) slow IV push every 1-5 minutes for SBP less than on the length-based tape, and/or patient not responding to previous treatment.

PUSH DOSE EPINEPHRINE SOLUTION MIXING INSTRUCTIONS

1. Take Epinephrine 1:10,000 concentration (1 mg/10 ml) and waste 9 ml of Epinephrine
2. In same syringe draw 9 ml of saline from the patient's IV bag & shake well
3. Mixture now provides 10 ml of Epinephrine at 10 mcg/ml (0.01 mg/ml) concentration
4. Label syringe Epi 10 mcg/ml
5. USE CAUTION WHEN USING PUSH DOSE EPINEPHRINE
6. May consider Dopamine infusion at 5 to 20 mcg/kg/min if the above measure doesn't work.

Considerations

Try to identify and treat reversible causes, medication overdose, hypoxia, sepsis, hypovolemia/dehydration, anaphylaxis, spontaneous pneumothorax, thrombosis, etc.