Neonatal Sepsis - PICU Phase

Arkansas Children's
HOSPITALS · RESEARCH · FOUNDATION

Signs & Symptoms of Critical Sepsis

- Hypotension (MAP <40 mm/Hg)
- Poor perfusion
- Reduced urine output
- Tachypnea/new oxygen requirement
- Mental status changes

Inclusion Criteria:

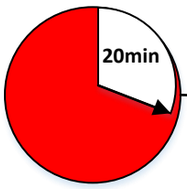
Suspected infection with organ dysfunction
OR
Positive screen with LIP-initiated resuscitation

Consider alternate diagnoses:

- Ductal dependent congenital heart disease
- Congenital adrenal hypoplasia
- Inborn errors in metabolism
- Arrhythmias
- CMS-P

SHOCK TIME GOALS

Time Zero=
Flagged for critical sepsis

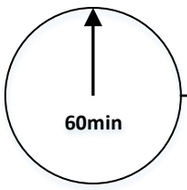


- Add supplemental oxygen regardless of SpO_2
- Evaluate IV access; additional IV/IO access rapidly as needed
- Administer 20 mL/kg boluses (first within 20 minutes and evaluate clinically after each bolus)
- Order labs and medications per **PICU CRITICAL SEPSIS ORDER SET**
- **ADMINISTER ANTIBIOTICS WITHIN 1 HOUR**

- Monitor clinical response
- Vital signs
- Frequent reassessment

- Infection source control
- Administer antibiotics in FIRST HOUR

Repeat fluid boluses (monitor clinical response with each fluid bolus)



FLUID REFRACTORY SHOCK

- Consider CVL, arterial line, foley catheter
- Consider ECHO, PRBCs if Hgb <10 g/dL

WARM SHOCK

- Titrate norepinephrine
- Consider epinephrine, vasopressin

COLD SHOCK/LOW BP

- Titrate epinephrine
- Consider norepinephrine

COLD SHOCK/NORMAL BP

- Titrate epinephrine
- Consider milrinone

CATECHOLAMINE RESISTANT SHOCK

- Consider stress dose hydrocortisone
- Consider other causes
  - -Pneumothorax
  - -Pericardial effusion
  - -Intra-abdominal hypertension
  - -Primary cardiac dysfunction

CONSIDER ECMO

- Obtain vessel ultrasound
- Consult Surgery

RESPIRATORY SUPPORT

- Consider intubation with continued acidosis and/or worsening hypoxia or hypercapnia
- Ensure adequate resuscitation prior to intubation
- **See CRITICAL SEPSIS ORDER SET for intubation drugs**

ADJUNCT THERAPIES

- Diuresis for fluid overload (ensure hemodynamic stability)
- Renal replacement therapy: consider with oliguria/anuria and fluid overload unresponsive to diuretics
- Plasma exchange: consider EARLY with thrombocytopenia and MODS

CLINICAL GOALS

1. Shock reversal- normal cap refill, normal UOP, resolution of altered mental status, normal mean arterial BP, SPO2 92-97
2. Antibiotics within 60 minutes
3. Ensure adequate and ongoing fluid resuscitation