Take-Home Points

- A baby born at or near term who is crying/breathing with good muscle tone does not need resuscitation; dry and cover the baby to maintain temperature; continue to observe.
- If baby is meconium-stained with normal resp effort, muscle tone and heart rate do not intubate; instead clear mouth and nose with a bulb syringe or suction catheter.
- If baby is meconium-stained with ↓ resp effort, poor muscle tone, heart rate < 100/min:
  - intubate and suction the trachea immediately after delivery
  - If meconium is retrieved and heart rate > 100/min, re-suction
  - If the heart rate < 100/min, administer PPV and consider suctioning again later
- Follow Heart Association/NRP guidelines for resuscitation (algorithm below):
• During resuscitation assess heart rate, respirations and oxygenation, ideally via preductal (right upper extremity) SpO2; if O2 is needed, target the SpO2 levels specified above
• Deliver chest compressions to lower sternum to a depth of about 1/3rd AP chest diameter; ratio of compressions to ventilations = 3:1, or 90:30 per min with exhalation coordinated with first of 3 compressions
• Coordinated chest compressions and ventilations should continue until the heart rate is at least 60/min; if heart remains < 60/min despite adequate ventilation with O2 and chest compressions, epinephrine should be considered
• Chest transillumination that produces a circular reflected halo pattern can quickly rule out a pneumothorax
• Exhaled CO2 detection is effective for confirmation of ET tube placement in infants
• If respiratory acidosis, hypoxemia and bradycardia persist, consider intubation and mechanical ventilation
• For infants with meconium aspiration syndrome (MAS) needing mechanical ventilation:
  o Use a patient-triggered mode (SIMV or A/C)
  o Volume (VT ~ 6-7 mL/kg) or pressure (25-30 cm H2O) control is acceptable
  o To minimize air-trapping assure adequate exhalation times via low rates (30-40/min) and/or low I:E ratios (1:2 or less)
  o Apply PEEP (4 to 8 cm H2O) as needed to manage atelectasis and hypoxemia
  o Consider high frequency jet ventilation (240–360 breaths/min + low conventional ventilator rate) or oscillation (f = 6 Hz) for infants with refractory hypoxemia and/or respiratory acidosis on conventional ventilation
• Consider exogenous surfactant therapy for infants with MAS and refractory hypoxemia
• Consider inhaled nitric oxide therapy for MAS with persistent pulmonary hypertension of the newborn (PPHN)

Follow-up Resources

Standard Text Resources:


Useful Web Links:


