iii. Neonatal oxygen mask.

Oxygen administration using oxygen tubing, anesthesia mask and bag

c. When free flow oxygen is administered and central cyanosis resolved, the oxygen should be withdrawn slowly and the neonate's condition evaluated.

d. A self inflating bag (Laedral™ bag) should not be used to provide free flow oxygen.

D. Bag and Mask Ventilation

1. Indications

a. Neonate is apneic or having gasping respirations after initial tactile stimulation, or

b. Heart rate <100

2. Ventilation using a mask is contraindicated in neonates suspected of having a diaphragmatic hernia. Intubate these neonates if positive pressure ventilation (PPV) is required. Diaphragmatic hernia may be suspected if:

a. Respiratory distress is present

b. Cyanosis continues after bag and mask ventilation
wait until after the five minute Apgar score to lessen the chances of producing a vagal response.

4. As a general rule, the person intubating and suctioning the neonate should be the most experienced and skilled person in the delivery room.

5. In neonates with spontaneous respirations, provide 100% oxygen during the suctioning and intubation procedures in order to minimize hypoxia. (Refer to Neonatal Guidelines of Care: Basic Guidelines for Administration of Oxygen)

6. DO NOT stimulate the neonate or apply positive pressure until meconium has been cleared from the trachea.

7. Do not place fluid in the endotracheal tube to irrigate and 'loosen up' the meconium. This process may wash any remaining meconium present further down the tracheo-bronchial tree.

V. Complications: Sequelae resulting from neonatal resuscitation may be secondary to the neonatal depression or to the procedure itself. Complications resulting from the procedure can be prevented or minimized if staff are properly trained and maintain expertise in the procedures performed.

A. Complications Resulting from Neonatal Depression

1. Hypoxic ischemic encephalopathy (HIE)

2. Intracranial hemorrhage (preterm neonates)

3. Seizures

4. Hypoxic ischemic myocardiopathy

5. Persistent fetal circulation and pulmonary hypertension

6. Renal tubular damage

7. Hypoglycemia

8. Hypocalcemia

9. Necrotizing enterocolitis
REFERENCES


SUCTION EQUIPMENT

- Bulb syringe
- Suction machine, manometer, canister & connecting tubing
- Suction catheters: Sizes 6, 8, 10 Fr
- Size 8 Fr feeding tube and 20 cc syringe
- Meconium aspirator

BAG AND MASK EQUIPMENT

- Neonatal resuscitation bag with a pressure release (pop off) valve and/or pressure gauge. The bag must be capable of delivering 90%-100% oxygen.
- Face masks: Newborn and low birth weight sizes (cushioned rims preferred).
- Oral airways: Newborn and low birth weight sizes
- Oxygen with flow meter and tubing

INTUBATION EQUIPMENT

- Laryngoscope with term newborn (#1) and preterm (#0) blades with extra bulb and batteries
- Endotracheal tubes: Sizes 5, 3.0, 3.5, 4.0 mm
- Neonatal stylet
- Scissors
- Gloves

MEDICATIONS

- Sodium bicarbonate 4.2% (5 Meg/10 ml): 10 ml ampules
- Epinephrine 1: 10,000: 3 ml or 10 ml ampules
- Naloxone 0.4 mg/ml or 0 mg/ml ampules
- Volume expander—one or more of these:
  - Albumin 5% solution
  - Normal saline
  - Ringer's lactate
  - Dextrose 10%: 50 ml
  - Normal saline: 10 ml to 30 ml

MISCELLANEOUS

- Radiant warmer
- Stethoscope
- Adhesive tape: 1/2 or 3/4 inch roll
- Syringes: 1 cc, 3 cc, 5 cc, 10 cc, 20 cc