NEONATAL CPR

Purpose: The respiratory therapist should be well versed in CPR for neonates. Certification in PALS and NRP is encouraged.

Description: The respiratory therapist is responsible for the ventilation and oxygenation of the patient, and may assist in chest compressions of the infant, during a code situation. Continue to mask bag the patient until a physician arrives at the bedside. An oral gastric tube should be placed, if the patient is bagged for more than two minutes.

Indications: Bradycardia with imminent demise.

Personnel: Respiratory therapists and technicians.

Procedure:

1. If patient is apneic and bradycardic, attempt to stimulate the patient by gently shaking and reposition the patient to open and maintain the airway. If patient is cyanotic, give blowby 0_2.
2. If patient does not improve, start to mask and bag the patient. Notify a physician immediately.
3. If the patient still does not respond, the most qualified person at the bedside should intubate the patient.
4. After intubation, the patient should be assessed for adequate breath sounds and heart rate for oxygenation and ventilation.
5. Chest compressions should be performed if the heart rate is less than 60 beats per minute or between 60-80 beats per minute and not rising, despite adequate ventilation with 100% oxygen for approximately 30 seconds. To perform compressions, two fingers (middle and ring) should be placed on the third of the sternum. (Just below an imaginary line drawn between the nipples). The sternum should be compressed 1/2 to 3/4 of an inch in a smooth non-jerky fashion. The pulse rate should be checked periodically and compressions discontinued when the heart rate >80 beats per minute. Chest compressions should always be accompanied by positive-pressure ventilation with 100% oxygen. Compressions interposed in a 3:1 ratio with ventilations, 90 compressions with 30 breaths in a one-minute period, is the most effective. Three compressions followed by a pause to allow for delivery of an effective breath. The rate of compressions combined with ventilation should be 120 per minute, that is, 90 compressions and 30 breaths per minute.
6. CPR is to be continued until the patient's heart rate is > 80 beats per minute, or until the physician "calls" the code.
7. Bradycardia in the neonatal period is usually the result of profound hypoxia. Medications should be administered if, despite adequate ventilation with 100% oxygen and chest compressions, the heart rate remains less than 80 beats per minute.
8. Intermittent ABG's may be obtained during the code.
9. If patient is resuscitated, a ventilator may need to be adjusted per physician orders.

NOTE: During any resuscitation effort, make sure the equipment required is setup properly and in working order. Properly sized equipment is essential for an expedient resuscitation.

Infection Control: Universal precautions should be used during this procedure.

References:
American Heart Association, Neonatal Resuscitation Program, 1994.
American Heart Association, Pediatric Advanced Life Support, 1995.

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