

## **UNIT TWO: OBSTETRICS**

### **SECTION A: NORMAL OBSTETRICS**

#### **OBJECTIVE 12: IMMEDIATE CARE OF THE NEWBORN**

**Rationale:** Assessment of the newborn allows recognition of the abnormalities requiring intervention.

The student will be able to describe:

- A. Techniques for assessing newborn status
- B. Immediate care of the normal newborn
- C. Situations requiring immediate intervention in newborn care

I. Techniques to assess newborn status

A. Apgar score

SIGN	0	1	2
Heart rate	Absent	Below 100	Over 100
Respiratory effort	Absent	Slow, irregular	Good, crying
Muscle tone	Flaccid	Some flexion of extremities	Active motion
Reflex irritability	No response	Grimace	Vigorous cry
Color	Blue, pale	Body pink, extremities blue	Completely pink

- Factors affecting Apgar score
  - Prematurity
  - Maternal sedation/analgesia
  - Neurologic conditions in infant
- Scores
  - 7-10 – needs no resuscitation
  - 4-6 – needs some resuscitation
  - 0-3 – needs aggressive resuscitation

B. Umbilical cord blood acid-base studies

- Umbilical **arterial** blood gas (norms)
  - pH ~7.28
  - pCO<sub>2</sub> 49-50 mmHg
  - HCO<sub>3</sub> – 22-26
  - Base excess ~ -3 mEq/L
- May be best way to assess preterm infant

II. Immediate care of newborn

A. At delivery

- Wipe face/mouth
- Suction nares/mouth
- Clamp/cut cord
- Place infant supine/head lowered – heated unit

B. Subsequent care

- Keep warm
- Vitamin K
- Eye care
  - Gonococcal ophthalmia neonatorum
    - Penicillin ointment 100,000 U/g
    - Penicillin G 50,000 U IM
    - Tetracycline ophthalmic ointment (1%)
    - Erythromycin ointment (0.5%)
  - Chlamydial conjunctivitis
    - Tetracycline ointment

- Erythromycin ointment
- Povidone-iodine solution 2.5%

### III. Situations requiring immediate care

- A. Moderately depressed
  - If no response by 1-2 min., give O<sub>2</sub>
  - Still no response, consider intubation
- B. Severely depressed
  - Intubate immediately
  - Cardiac massage
    - 100-200/min.
    - Use index/middle finger for compression
    - Mid-to-lower 1/3 sternum
    - Interrupt every 5 sec. for ventilation
  - If heart rate < 80 give epinephrine
- C. Hypovolemia
  - Give volume expanders
  - Whole blood
  - 5% albumin
- D. Depression secondary to maternal drugs – Narcan 0.1 mg/kg IV or ET
- E. Meconium-stained amniotic fluid
  - Aggressive suctioning
    - Nasal
    - Below cords
  - Aggressive pulmonary care
    - Oxygenation

### References

Cunningham FG, Gant NF, Leveno KJ, Gilstrap LC III, Hauth JC, Wenstrom KD. “The newborn infant” (Chap 16), *Williams Obstetrics, 21<sup>st</sup> Ed.* McGraw-Hill: New York, 2001:385-402.

American College of Obstetricians and Gynecologists. “Use and abuse of the Apgar score.” Committee Opinion No 174, Washington DC: ACOG July 1996.

Casey BM, McIntire DD, Leveno KJ. “The continuing value of the Apgar score for the assessment of newborn infants,” *N Engl J Med* 2001; 344:467-71.

Adapted from Association of Professors of Gynecology and Obstetrics Medical Student Educational Objectives, 7<sup>th</sup> edition, copyright 1997.