History

- Mrs. P is a 25-year-old Gravida 3 Para 2 with prenatal lab work as follows: blood type B+; antibody -; RPR non-reactive; rubella immune; Hepatitis B and C -; HIV -; Group B Strep +; glucose screen 156; 3-hour glucose tolerance test: 95/200/187/125. She is on insulin each morning and every hour of sleep. Today’s glucose screen was 87. She is in labor at 36 weeks gestation. She received 1 dose of penicillin 2 hours prior to delivery. Membranes ruptured 8 hours prior to delivery with clear fluid. You are asked to attend her delivery for forceps extraction.

Question 1: What conditions in the baby should you be alert for?

- At delivery, Baby Boy P has an initial cry, heart rate of >100, and cyanosis. Apgars were 8 at 1 minute and 8 at 5 minutes. At 10 minutes he is still blue, with an oxygen saturation of 77%, and he is placed on face mask oxygen. He has grunting, flaring, retractions, and diminished air exchange on exam. He is brought to the nursery. His weight is 4,020 g. His glucose on admission is 18.

Question 2: Regarding his respiratory signs/symptoms, what is his differential diagnosis (potential problems that could cause his respiratory symptoms)?

Question 3: What nursing actions do you anticipate this infant will need?
Answers to case study questions:

1. What conditions in the baby should you be alert for?
   - Hypoglycemia as infant of diabetic mother (IDM)
   - Birth injury related to forceps delivery and potential macrosomia
   - Respiratory distress syndrome – delayed cortisol induction and lung immaturity in premature infant
   - Hypocalcemia can occur with IDM
   - Sepsis/pneumonia related to group B strep with inadequate treatment

2. What is his differential diagnosis?
   - Respiratory distress syndrome
   - Transient tachypnea of the newborn
   - Pneumonia/sepsis
   - Pneumothorax

3. What nursing actions do you anticipate for this infant?
   - Initial assessment and vital signs with documentation
   - Support respiratory needs with hood oxygen, CPAP, or ventilation as needed.
   - Start peripheral intravenous line as will need glucose source and not able to eat orally.
   - Glucose bolus 2ml/kg 10% dextrose
   - Monitor glucoses as per hospital policy
   - Assist physician or nurse practitioner with any procedures such as drawing bloodwork (cultures, blood gas, complete blood count), intubations if needed, or umbilical line insertion if needed.
   - Administer antibiotics as ordered.
   - Support parents by providing explanations about infant’s conditions, plan of care, environment and equipment. Promote bonding. If mother plans on breastfeeding encourage use of breast pump to maintain milk supply.