Fetomaternal Hemorrhage
Blair J. Wylie, MD, MPH, and Mary E. D’Alton, MD
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1. Although limited, the diagnostic standard for fetomaternal hemorrhage is:

   A. Fetal anemia
   B. Maternal polycythemia
   C. Kleihauer-Betke screen
   D. Newborn hematocrit
   E. Fetal heart rate changes
2. In almost all cases of fetomaternal hemorrhage, the fetal volume lost is:

   A. ≤ 1 mL  
   B. ≤ 5 mL  
   C. ≤ 15 mL  
   D. ≤ 30 mL  
   E. ≤ 60 mL

3. Fetal red blood cell lifespan is approximately:

   A. 25 days  
   B. 50 days  
   C. 75 days  
   D. 100 days  
   E. 125 days

4. Unless cleared by maternal antibodies, following a fetomaternal hemorrhage, one half of the fetal red blood cells will still be present in the maternal circulation at:

   A. 1 week  
   B. 5 weeks  
   C. 3 months  
   D. 6 months  
   E. 1 year

5. The most common cause of fetomaternal hemorrhage of greater than 30 mL is:

   A. External cephalic version  
   B. Manual removal of the placenta  
   C. Cesarean delivery  
   D. Abdominal trauma  
   E. Unknown
6. The most common clinical antenatal presentation of fetomaternal hemorrhage is:

A. Decreased or absent fetal movement
B. Sinusoidal fetal heart rate patterns
C. Fetal bradycardia
D. In utero fetal demise
E. Rh isoimmunization

7. In a review of 120 cases of fetomaternal hemorrhage greater than 50 mL, the fetal heart rate tracings were considered “abnormal” what percentage of the time?

A. Never
B. Less than 10 percent of the time
C. 25% of the time
D. 50% of the time
E. More than 90% of the time

8. In which of the clinical situations below might the Kleihauer-Betke test return a false-positive result?

A. Fetal postmaturity
B. Maternal polycythemia
C. Rh negative fetus
D. Maternal sickle-cell anemia
E. Fetomaternal hemorrhage of greater than 80 mL

9. A patient is transferred to your care at 35 weeks of gestation following blunt trauma to the abdomen. The mother’s condition is stable with no evidence of adverse effect except for a small bruise on the abdomen. The fetus is reported as less active and fetal heart rate testing shows a sinusoidal pattern. A Kleihauer-Betke test is reported as “positive.” The most appropriate next step in the management of this patient should be:

A. Fetal non-stress testing
B. Fetal biophysical profile
C. Middle cerebral artery Doppler studies
D. Cordocentesis
E. Delivery
10. In addition to cost, the greatest drawback to the use of middle cerebral artery Doppler studies to screen future pregnancies following a pregnancy with a fetomaternal hemorrhage is the test’s:

A. High false-negative rate
B. High false-positive rate
C. Low true-positive rate
D. Low true-negative rate
E. Lack of predictive value

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