

## Fetomaternal Hemorrhage

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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.  $\leq 1$  mL
  - B.  $\leq 5$  mL
  - C.  $\leq 15$  mL
  - D.  $\leq 30$  mL
  - E.  $\leq 60$  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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