Amniocentesis

Examination

1. The first reports regarding the amniocentesis procedure that occurred in the 1870's and early 1880's were performed
   a. for the determination of fetal sex.
   b. for detecting the possibility of infection.
   c. in order to do amniography.
   d. for detecting possible problems in Rh negative women.
   e. to relieve patients that were suffering from severe polyhydramnios.

2. When more than one X-chromosome is present, one is usually active and the other is inactivated. The inactivated X-chromosome forms a chromatin mass called a
   a. Fuchs body.
   b. Riis body.
   c. Barr body.
   d. Menees body.
   e. Lambl body.

3. From a statistical point of view, amniocentesis is a very safe procedure with an overall complication rate that is usually less than
   a. 5%
   b. 1%
   c. 10%
   d. 2%
   e. 7%

4. The complications related to amniocentesis include all of the following EXCEPT
   a. pregnancy risks of rupturing the membranes and bleeding
   b. fetal risks of trauma and or death
   c. maternal risks of intra-abdominal infection
   d. fetal risks of endometriosis in the needle track
   e. maternal risks of amniotic fluid embolus

5. The main concern in performing amniocentesis is a complication that results in
   a. an amniotic fluid embolus.
   b. fetal trauma.
   c. the premature delivery of the pregnancy.
   d. the development of endometriosis.
   e. fetal infection.

6. Regarding amniocentesis, the most difficult time period to deal with is
   a. the viable pregnancy that is significantly premature (23 weeks up to 30 weeks gestation).
   b. the viable pregnancy at term or near term (> 34 weeks gestation).
   c. the viable pregnancy that is premature (30 to 34 weeks gestation).
   d. the previable pregnancy (from 15 to 22 weeks gestation).
   e. the previable pregnancy (from 11 to 14 weeks gestation).
7. The majority of studies that have analyzed the pregnancy loss rate related to the procedure, have focused on the
   a. amniocentesis used for ruling out infection.
   b. term amniocentesis used for determining fetal lung maturity.
   c. amniocentesis used for determining problems seen in Rh negative women.
   d. genetic amniocentesis performed prior to viability.
   e. amniocentesis performed for relieving pressure seen with polyhydramnios.

8. A pregnancy loss rate following amniocentesis of 1 in 200 to 1 in 250 is probably the most often used risk rate quoted and was the rate found in the United States Collaborative study. However, to date there has only been one prospective randomized study on genetic amniocentesis, which identified a loss rate of
   a. 1 in 100 or 1%
   b. 1 in 100 or 0.1%
   c. 1 in 500 or 0.2%
   d. 1 in 10 or 10%
   e. 1 in 2000 or 0.05%

9. The more significant issues involved in regard to amniocentesis and its complications include all of the following EXCEPT
   a. the use of ultrasound and how it is utilized
   b. the gauge of the needle
   c. the number of attempts needed to be successful
   d. the experience of the performer
   e. the amount of fluid obtained

10. Studies have shown that amniotic fluid pockets are often transient due to
    a. the gauge of the needle
    b. fetal movement
    c. the color of the fluid
    d. the transducer that is used
    e. the number of attempts needed to be successful

11. Currently, before an amniocentesis is attempted, an ultrasound should be performed to determine all of the following EXCEPT
    a. fetal viability
    b. the uterine wall thickness
    c. fetal position
    d. placental location
    e. the number of fetuses

12. In regard to needle size, it appears that fewer problems occur with smaller gauge needles of the _____ size.
    a. 12 to 14
    b. 14 to 16
    c. 16 to 14
    d. 18 to 20
    e. 20 to 22

13. Common causes for amniocentesis failure include all of the following EXCEPT
    a. tenting of the membranes
    b. isolated uterine wall contraction which distorts the fluid pocket
    c. the needle bending on the skin upon insertion
    d. fetal movement that changes the shape of the fluid pocket
e. a changing maternal bladder size

14. **Membrane tenting is**
   a. where the needle traverses the abdominal wall but diverts when entering the uterine wall.
   b. the description of membranes that are already separated before the amniocentesis is attempted.
   c. where a “tent” of blood develops between the uterine wall and the membrane after the procedure is completed.
   d. where an isolated uterine wall contraction develops as the needle enters the uterine wall, which distorts the amniotic fluid pocket.
   e. where the needle traverses the uterine wall, but instead of puncturing the membranes, the needle actually pushes the membranes off the inner uterine wall.

15. **A transplacental amniocentesis procedure is controversial; however**
   a. most authorities believe that traversing the placenta almost always increases the complication rate
   b. most authorities believe that traversing the placenta never increases the complication rate
   c. there are numerous studies on this topic, and thus, there should not be any concerns.
   d. it seems apparent that intra-amniotic bleeding is more common with a transplacental procedure, however, membrane tenting occurs less often
   e. most diagnosticians prefer to traverse the placenta if at all possible.

16. **An “early amniocentesis” procedure is one that is performed between _____ weeks gestation.**
   a. 7 and 9
   b. 11 and 14
   c. 15 and 20
   d. 20 and 23
   e. 34 and 37

17. **Brown fluid obtained at the time of genetic amniocentesis**
   a. is seen on average about 12% of the time
   b. reveals that the pigment usually consists of intestinal contents
   c. occurs on average about 2% of the time and the pigment is usually hemoglobin
   d. is a common occurrence and is not associated with a higher pregnancy loss rate
   e. has nothing to do with the amniotic fluid AFP level

18. **Intra-amniotic bleeding from the amniocentesis insertion site**
   a. rarely occurs if ever
   b. when seen usually lasts for more than 30 seconds
   c. could result in inutero clots that might cause a fetal malformation
   d. is probably a normal occurrence
   e. could result in inutero clots that will lead to the development of fetal masses

19. **The fact that in utero visible bleeding can occur raises a concern with performing an amniocentesis on pregnant women who have**
   a. a blood borne infection that may not cross the placenta under normal circumstances.
   b. diabetes
   c. hypertension
   d. lupus
   e. a maternal history of frequent pregnancy loss.

20. **Fetal to maternal bleeding with amniocentesis**
   a. when it occurs, is usually very small and does not result in any untoward outcome
   b. can be of concern for Rh positive pregnant women
   c. can be of concern for the Rh negative fetus
   d. has been studied by using the Kleihauer-Betke test which analyzes fetal blood for the presence of maternal cells
e. will usually decrease the maternal serum AFP level, if it occurs