

MULTIPLE CHOICE

OB FETAL ANOMALIES CNS - PRACTICE SET - ANSWER KEY

PROPOSED FOR REVIEW - questions are the author's verbatim Q&A; distractors are auto-selected from other answers in the same bank and must be checked by a subject-matter reviewer (a distractor could coincidentally be correct). Not authoritative assessment content.

1. A 'dangling choroid plexus' within a dilated lateral ventricle is a sonographic sign of:

- A. A normal second-trimester ventricle
- B. Holoprosencephaly
- C. Ventriculomegaly or hydrocephalus**
- D. Dandy-Walker malformation

2. Which finding helps distinguish a cephalocele from a cystic hygroma?

- A. Location on the posterior neck only in a cephalocele
- B. Bilateral symmetry only in a cephalocele
- C. Presence of internal septations only in a cystic hygroma
- D. A calvarial defect with herniation of intracranial contents in a cephalocele**

3. The 'banana sign' associated with open spina bifida represents which underlying finding?

- A. Inward scalloping of the frontal bones
- B. Anterior curvature of the cerebellar hemispheres with effacement of the cisterna magna**
- C. Dilation of the lateral ventricles greater than 10 mm
- D. Failure of cleavage of the prosencephalon

4. An encephalocele is best defined as:

- A. Absence of the cerebral hemispheres with an intact calvarium
- B. Herniation of brain tissue and/or meninges through a defect in the cranial vault**
- C. Cystic dilation of the fourth ventricle with vermian agenesis
- D. Inward scalloping of the frontal bones

5. What is the normal upper limit for the atrial diameter of the fetal lateral ventricle?

- A. 10 mm**
- B. 15 mm
- C. 20 mm
- D. 5 mm

6. Severe ventriculomegaly is generally defined as an atrial diameter of:

- A. Greater than 8 mm
- B. Greater than 15 mm**
- C. Greater than 10 mm
- D. Greater than 5 mm

7. A myelomeningocele differs from a meningocele in that a myelomeningocele:

- A. Contains neural elements within the herniated sac**
- B. Contains only meninges and CSF
- C. Occurs only in the cervical spine
- D. Is always covered by skin

8. At what gestational age is the lemon sign most reliably detected in fetuses with open spina bifida?

- A. Third trimester only
- B. After 34 weeks only
- C. First trimester only
- D. Second trimester (approximately 16 to 24 weeks)**

9. Which infectious agent is most strongly associated with fetal microcephaly?

- A. Zika virus**
- B. *Listeria monocytogenes*
- C. Hepatitis B
- D. Group B streptococcus

10. Sonographic features of alobar holoprosencephaly include all of the following EXCEPT:

- A. Absent midline falx anteriorly
- B. A single monoventricle
- C. Fused thalami

D. Normal cavum septi pellucidi

11. Mild fetal ventriculomegaly is defined as an atrial measurement of the lateral ventricle of:

- A. 5 to 9 mm
- B. 10 to 15 mm**
- C. 16 to 20 mm
- D. Greater than 20 mm

12. Maternal supplementation with which vitamin reduces the risk of neural tube defects?

- A. Folic acid**
- B. Vitamin K
- C. Vitamin A
- D. Vitamin D

13. Acrania refers to which sonographic finding?

- A. Absence of brain tissue with an intact cranial vault
- B. Absence of the cranial vault with brain tissue still present**
- C. Herniation of meninges through a skull defect
- D. Failure of midline cleavage of the prosencephalon

14. Colpocephaly refers to which sonographic appearance?

- A. Dilation of the frontal horns only
- B. Cystic dilation of the fourth ventricle
- C. Disproportionate dilation of the occipital horns (atria) of the lateral ventricles**
- D. A single midline ventricle

15. Which structure is consistently absent in agenesis of the corpus callosum on prenatal sonography?

- A. Cerebellar vermis
- B. Cavum septi pellucidi**
- C. Lateral ventricles
- D. Falx cerebri

16. Which sonographic feature is most characteristic of agenesis of the corpus callosum?

- A. Colpocephaly with parallel, laterally displaced lateral ventricles and absent cavum septi pellucidi**
- B. Single monoventricle with fused thalami
- C. Concave frontal bones with effaced cisterna magna
- D. Cystic posterior fossa with vermian agenesis

17. Which of the following is NOT part of the classic Dandy-Walker malformation?

- A. Cystic dilation of the fourth ventricle
- B. Enlargement of the posterior fossa
- C. Vermian agenesis or hypoplasia
- D. Inward scalloping of the frontal bones**

18. Which CNS anomaly is incompatible with extrauterine life?

- A. Anencephaly**
- B. Mega cisterna magna with a normal vermis
- C. Isolated choroid plexus cyst
- D. Isolated mild ventriculomegaly

19. Which CNS anomaly is characterized by the absence of the cranial vault with exposed neural tissue above the orbits?

- A. Hydranencephaly
- B. Anencephaly**

- C. Encephalocele
- D. Holoprosencephaly

20. Isolated choroid plexus cysts in an otherwise normal-appearing fetus most often:

- A. Indicate alobar holoprosencephaly
- B. Progress to hydrocephalus by the third trimester
- C. Resolve spontaneously by approximately 26 to 28 weeks gestation**
- D. Cause obstructive ventriculomegaly

21. Which facial anomaly is most strongly associated with alobar holoprosencephaly?

- A. Isolated unilateral cleft lip
- B. Cyclopia with a proboscis**
- C. Micrognathia with glossoptosis
- D. Frontal bossing only

22. A fetus has bilateral choroid plexus cysts and clenched hands with overlapping fingers. The most likely underlying diagnosis is:

- A. Turner syndrome
- B. Trisomy 18**
- C. Trisomy 21
- D. Trisomy 13

23. At which gestational age does the cranial vault normally complete ossification, allowing reliable sonographic detection of acrania/anencephaly?

- A. By 6 to 7 weeks
- B. By 20 to 22 weeks
- C. By 28 to 30 weeks
- D. By approximately 11 to 12 weeks**

24. Meckel-Gruber syndrome classically includes which triad of findings?

- A. Occipital encephalocele, bilateral enlarged echogenic cystic kidneys, and postaxial polydactyly**
- B. Holoprosencephaly, cleft lip, and cardiac defect
- C. Dandy-Walker malformation, agenesis of the corpus callosum, and microcephaly
- D. Anencephaly, omphalocele, and clubfoot

25. The 'lemon sign' on second-trimester sonography refers to which finding?

- A. Scalloping or concave indentation of the frontal bones of the fetal cranium**
- B. Single midline ventricle with fused thalami
- C. Anterior curvature of the cerebellum effacing the cisterna magna
- D. Cystic dilation of the posterior fossa with vermian agenesis