ABOG Oral Boards Obstetrics Practice Test (Sample)

Study Guide

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Questions

1. Which method is utilized to ascertain gestational age prior to 23 weeks in stillborn cases?

A. Ultrasound

B. Measure foot length

C. Measure fetal heart rate

D. X-ray analysis

2. What impact does chronic steroid use have on wound healing?

A. Enhances collagen deposition

B. Increases fibroblast proliferation

C. Interferes with inflammation and angiogenesis

D. Improves wound contraction

3. Which of the following is NOT an intrauterine resuscitative measure?

A. Change maternal position

B. Discontinue labor stimulating agents

C. Begin immediate C-section

D. Cervical exam for complications

4. Which characterizes an unsatisfactory contraction stress test?

A. Less than 3 contractions in 10 minutes

B. All decelerations present

C. Negative result with mild variable decels

D. Repeated high deceleration after contractions

5. In beta thalassemia, what happens to the levels of Hb A?

A. Hb A levels increase

B. Hb A levels decrease

C. Hb A levels remain unchanged

D. Hb A is absent

6. What type of bariatric surgery restricts total intake and limits calories obtained?

- **A. Restrictive surgery**
- **B. Malabsorptive surgery**
- **C. Combination surgery**
- **D. Endoscopic surgery**

7. What is the role of nitrofurantoin in treating UTIs?

- **A. It acts as a diuretic**
- **B. It is a bactericide concentrated in the urine**
- **C. It serves as a hormonal agent**
- **D. It promotes urine alkalization**

8. What is NOT a negative predictor for TOLAC?

- **A. Labor augmentation**
- **B. Low BMI**
- **C. PreE**
- **D. No previous SVD**

9. What is the mechanism of action of magnesium sulfate?

- **A. Calcium channel inhibitor**
- **B. Beta-agonist**
- **C. Prostaglandin antagonist**
- **D. Opioid receptor agonist**

10. What is the preferred antibiotic for PPROM due to its ease of administration?

- **A. Amoxicillin**
- **B. Erythromycin**
- **C. Azithromycin**
- **D. Clindamycin**

Answers

1. B
2. C
3. C
4. A
5. B
6. A
7. B
8. B
9. A
10. C

Explanations

1. Which method is utilized to ascertain gestational age prior to 23 weeks in stillborn cases?

A. Ultrasound

B. Measure foot length

C. Measure fetal heart rate

D. X-ray analysis

Measuring foot length is considered a reliable method for determining gestational age prior to 23 weeks in stillborn cases due to its ease of use and specific correlation with gestational age. The growth of the fetus follows a predictable pattern, and various measurements, including foot length, can provide important clues about how far along the pregnancy was at the time of stillbirth. Research has shown that foot length correlates well with gestational age, especially in early gestation. This method is advantageous because it is non-invasive, does not expose the remains to radiation, and can be performed even when other modalities may not be available. While other methods, such as ultrasound or x-ray analysis, may be used for assessing gestational age, they have limitations. Ultrasound may not be as effective in stillborn cases if the quality of the images is poor or if there is difficulty visualizing the fetus due to challenges associated with post-mortem examination. Similarly, x-ray analysis involves radiation exposure, which is not ideal in such scenarios. Measuring fetal heart rate is not applicable in stillborn cases, as there is no fetal heart activity to assess. Thus, when evaluating gestational age specifically in stillborn cases prior to 23 weeks, measuring foot length

2. What impact does chronic steroid use have on wound healing?

A. Enhances collagen deposition

B. Increases fibroblast proliferation

C. Interferes with inflammation and angiogenesis

D. Improves wound contraction

Chronic steroid use significantly interferes with several critical processes involved in wound healing, particularly inflammation and angiogenesis. Corticosteroids are known to inhibit the inflammatory response, which is essential for the repair process following injury. Inflammation is the body's initial response to injury, allowing for the recruitment of cells that are necessary for tissue repair, such as macrophages and neutrophils. These cells facilitate the clearance of debris and the initiation of the healing process. Additionally, steroids can hinder angiogenesis, the formation of new blood vessels, which is vital for delivering necessary nutrients and oxygen to the healing tissue. Without adequate blood supply, the metabolism of cells involved in the healing process is compromised, further delaying recovery. These actions together result in a reduction in the overall effectiveness of wound healing, leading to slower recovery times and a higher likelihood of complications such as infection or dehiscence. The correct understanding of how chronic steroid use disrupts these fundamental healing processes is crucial in managing patients who may require long-term steroid therapy.

3. Which of the following is NOT an intrauterine resuscitative measure?

A. Change maternal position

B. Discontinue labor stimulating agents

C. Begin immediate C-section

D. Cervical exam for complications

The correct answer indicates that beginning an immediate cesarean section is not considered an intrauterine resuscitative measure. Intrauterine resuscitative measures are interventions aimed at improving fetal oxygenation and outcomes during labor, particularly in response to signs of fetal distress. These measures are typically aimed at addressing reversible causes of fetal compromise. Changing the maternal position can improve uterine blood flow and relieve umbilical cord compression, thereby enhancing fetal oxygen delivery. Discontinuing labor-stimulating agents is crucial when uterine hyperstimulation is suspected, as it may restore normal uterine activity and improve fetal condition. A cervical exam can assess for complications such as cord prolapse or indications for operative delivery, which could be pertinent to managing fetal distress. In contrast, proceeding directly to an immediate cesarean section is considered a definitive intervention rather than a resuscitative measure. It is usually reserved for situations where intrauterine resuscitation efforts have failed or when there are indications that the fetus is in severe distress and immediate delivery is necessary for the safety of both the mother and the baby. Thus, while a cesarean section is an urgent procedure in some cases, it does not fall under the category of resuscitative measures aimed at temporarily

4. Which characterizes an unsatisfactory contraction stress test?

A. Less than 3 contractions in 10 minutes

B. All decelerations present

C. Negative result with mild variable decels

D. Repeated high deceleration after contractions

An unsatisfactory contraction stress test is characterized by less than 3 contractions occurring in a 10-minute period. The primary purpose of a contraction stress test is to assess the fetal heart rate response to uterine contractions and evaluate the placental function. For the test to be considered satisfactory and yield meaningful results, there must be a sufficient number of contractions to analyze. The absence of enough contractions may lead to an inability to provide an adequate assessment of fetal well-being, hence defined as unsatisfactory. In contrast, a negative result with mild variable decelerations may indicate a normal fetal response, not meeting the criteria for an unsatisfactory test, while repeated high decelerations after contractions could suggest potential fetal distress. Therefore, a lack of sufficient contractions directly impacts the validity and reliability of the test outcome.

5. In beta thalassemia, what happens to the levels of Hb A?

A. Hb A levels increase

B. Hb A levels decrease

C. Hb A levels remain unchanged

D. Hb A is absent

In beta thalassemia, the body's ability to produce beta globin chains, which are crucial for the formation of hemoglobin A (Hb A), is reduced due to mutations in the beta-globin gene. Consequently, this leads to decreased synthesis of Hb A, which is the normal adult hemoglobin composed of two alpha and two beta chains. As the beta chains are either not produced or produced in insufficient quantities, the overall levels of Hb A in the blood decrease. In beta thalassemia major and intermedia, the reduction is significant enough that Hb A may be barely detectable or even absent in severe cases. In patients with beta thalassemia minor, while they may have some normal erythropoiesis, the amounts of Hb A are still reduced compared to normal levels. Additionally, patients often produce alternative forms of hemoglobin, such as Hb F (fetal hemoglobin), and may also have an increase in Hb A2 (the variant consisting of two alpha and two delta chains), but these compensatory mechanisms do not offset the decreased levels of Hb A. Therefore, it is accurate to conclude that in beta thalassemia, the levels of Hb A decrease.

6. What type of bariatric surgery restricts total intake and limits calories obtained?

A. Restrictive surgery

B. Malabsorptive surgery

C. Combination surgery

D. Endoscopic surgery

Restrictive surgery is characterized by procedures that limit the amount of food the stomach can hold, effectively reducing total caloric intake. This type of surgery typically involves the creation of a smaller stomach pouch that restricts the volume of food consumed at one time, leading to early satiety and reduced appetite. Procedures such as gastric banding and sleeve gastrectomy are examples of restrictive surgeries. They focus primarily on decreasing the size of the stomach, leading to a feeling of fullness with less food and thus promoting weight loss through reduced caloric intake. In contrast, malabsorptive surgery involves altering the digestive process to reduce calorie and nutrient absorption, which is not the primary mechanism in restrictive surgery. Combination surgeries incorporate both restrictive and malabsorptive elements, while endoscopic surgery typically refers to minimally invasive techniques not focused solely on restriction. Understanding the nuances of these types of bariatric procedures is crucial for recognizing their mechanisms and implications in patient management and weight loss outcomes.

7. What is the role of nitrofurantoin in treating UTIs?

A. It acts as a diuretic

B. It is a bactericide concentrated in the urine

C. It serves as a hormonal agent

D. It promotes urine alkalization

Nitrofurantoin plays a critical role in treating urinary tract infections (UTIs) due to its unique pharmacological properties. This medication acts as a bactericide, effectively targeting and inhibiting the growth of bacteria within the urinary tract. One of the key features of nitrofurantoin is that it is concentrated in the urine after systemic absorption, which enhances its antibacterial effectiveness in the urinary environment where UTIs typically occur. Nitrofurantoin's mechanism of action involves the disruption of bacterial cell metabolism, leading to the inhibition of protein synthesis and DNA replication. Its effectiveness is particularly pronounced against common uropathogens, such as Escherichia coli, making it a preferred choice for uncomplicated UTIs. The ability of nitrofurantoin to achieve high concentrations in the urine while maintaining low systemic levels helps minimize side effects while providing potent antimicrobial activity where it is most needed. Other roles listed, such as being a diuretic or a hormonal agent, do not apply to nitrofurantoin, and its action does not involve promoting urine alkalization. Thus, the focus on its bactericidal properties and its concentrated presence in the urinary tract underlines the rationale for its use in treating UTIs.

8. What is NOT a negative predictor for TOLAC?

A. Labor augmentation

B. Low BMI

C. PreE

D. No previous SVD

A low body mass index (BMI) is considered a neutral or even potentially positive predictor for a trial of labor after cesarean (TOLAC). In the context of TOLAC, BMI is less likely to impact the success of a vaginal delivery. High BMI, on the other hand, is often linked to increased risk of complications during delivery and can be a negative predictor. In contrast, labor augmentation, the presence of preeclampsia (PreE), and having no previous spontaneous vaginal delivery (SVD) are all factors that can negatively influence the likelihood of a successful TOLAC. Labor augmentation can indicate concerns about labor progress, and preeclampsia can pose additional risks to both mother and baby during labor. Additionally, not having a history of successful vaginal deliveries may indicate a greater likelihood of complications in attempting labor, thereby acting as a negative predictor. Understanding these distinctions in predicting TOLAC success can help in managing care and counseling patients effectively regarding their delivery options.

9. What is the mechanism of action of magnesium sulfate?

A. Calcium channel inhibitor

B. Beta-agonist

C. Prostaglandin antagonist

D. Opioid receptor agonist

Magnesium sulfate acts primarily as a calcium channel inhibitor. By inhibiting the influx of calcium ions into cells, it effectively reduces the excitability of the neuromuscular junction and decreases the release of acetylcholine, which can lead to muscle relaxation. This property is particularly valuable in obstetrics for managing conditions such as preeclampsia and eclampsia because it helps to prevent seizures. Additionally, magnesium sulfate's ability to interfere with calcium signaling makes it useful as a tocolytic agent, as it can help relax the uterine smooth muscle and delay premature labor. In the context of the other options, while it is critical to understand the distinct mechanisms of various pharmacological agents, the role of magnesium sulfate as a calcium channel inhibitor is key to its therapeutic effects in obstetric care.

10. What is the preferred antibiotic for PPROM due to its ease of administration?

A. Amoxicillin

B. Erythromycin

C. Azithromycin

D. Clindamycin

The preferred antibiotic for preterm premature rupture of membranes (PPROM) is azithromycin, primarily due to its ease of administration, particularly in outpatient settings. Azithromycin is a macrolide antibiotic known for its favorable pharmacokinetics, including a long half-life, which allows for once-daily dosing or even a single-dose regimen. This is advantageous in managing PPROM as it facilitates adherence to the treatment regimen without requiring frequent dosing, which can be burdensome for patients. Additionally, azithromycin has a broad spectrum of activity, covering key pathogens associated with infections in this context. It is effective against both aerobic and anaerobic bacteria, which may be involved in intra-amniotic infections that can arise after membrane rupture. The ease of administration and the effectiveness of azithromycin in treating potential infections make it a preferred choice in this situation, allowing for timely intervention while minimizing the complexity of the treatment plan for the patient. In contrast, other antibiotics may have more frequent dosing requirements or may not be as well-suited for outpatient administration, which can affect compliance and patient outcomes. Thus, azithromycin stands out as the optimal choice for managing PPROM.