Dr. High Yield Family Medicine Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

Questions

1. How can a baby acquire AV block?

A. Maternal diabetes

B. Maternal systemic lupus erythematosus (SLE)

C. Maternal hypertension

D. Maternal drug use

2. At what age is it recommended to begin colonoscopy screenings?

A. Age 45

B. Age 50

C. Age 55

D. Age 60

3. What is the primary goal in managing chronic obstructive pulmonary disease (COPD)?

A. To eliminate symptoms

B. To prevent disease progression and improve quality of life

C. To reduce hospitalizations

D. To cure the disease

4. What capability signifies a development by a 5-year-old in self-care?

A. Brushing teeth

B. Choosing their outfit

C. Writing their name

D. Tying shoelaces

5. Which bacteria is most commonly associated with causing meningitis?

A. Streptococcus pneumoniae

B. Escherichia coli

C. Staphylococcus aureus

D. Clostridium botulinum

6. What is the primary complication of untreated hypertension?

- **A. Stroke**
- **B. Cardiovascular disease**
- **C. Aortic dissection**
- **D. Chronic kidney disease**

7. What complication is most associated with intranasal steroid use?

- **A. Fungal infections**
- **B. Systemic hypertension**
- **C. Atrophy of mucosa**
- **D. Weight gain**

8. What is an expected finding on an EKG for a patient with hyperkalemia?

- **A. U waves**
- **B. Flat T waves**
- **C. Peaked T waves**
- **D. Inverted QRS complexes**

9. In which population is the use of aspirin for primary prevention particularly considered?

- **A. Individuals aged 30-39 years with high cholesterol**
- **B. Individuals aged 50-69 years with a 10-year cardiovascular risk of 10% or greater**
- **C. Individuals aged 40-49 years with a family history of heart disease**
- **D. Individuals aged 70 years and above**

10. Which laboratory finding is associated with liver cirrhosis?

- **A. Low bilirubin levels**
- **B. Low AST and ALT**
- **C. Elevated AST and ALT**
- **D. Normal alkaline phosphatase**

Answers

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

Explanations

1. How can a baby acquire AV block?

A. Maternal diabetes

B. Maternal systemic lupus erythematosus (SLE)

C. Maternal hypertension

D. Maternal drug use

A baby may acquire atrioventricular (AV) block as a result of maternal systemic lupus erythematosus (SLE) due to the presence of specific autoantibodies, particularly anti-Ro/SSA and anti-La/SSB antibodies. These antibodies can cross the placenta and affect the fetal heart, leading to congenital heart block. The mechanism involves inflammation and damage to the conduction system of the heart, which is responsible for maintaining the heart's electrical rhythm. This can lead to varying degrees of AV block, commonly resulting in complete heart block, which is particularly concerning and may require early intervention after birth. Maternal diabetes, hypertension, and drug use do not have a well-established direct link to the mechanism by which congenital AV block occurs. While these conditions can lead to a variety of complications in pregnancy, they are not specifically associated with the autoimmune process that causes fetal heart block as seen with maternal SLE.

2. At what age is it recommended to begin colonoscopy screenings?

A. Age 45

B. Age 50

C. Age 55

D. Age 60

The recommended age to begin colonoscopy screenings is 45, which reflects updated guidelines from several health organizations, including the American Cancer Society. Screening at this age is crucial because it allows for early detection of colorectal cancer, especially as risk factors for the disease, including age, family history, and certain lifestyle factors, typically increase. Starting screening at 45 aligns with the aim to catch potential cancers early when they are more treatable and can significantly reduce mortality from colorectal cancer. This guide aims to encourage earlier intervention and proactive measures. While it was once customary to begin screenings at age 50, current recommendations reflect an increasing trend in colorectal cancer incidence among younger populations, warranting earlier screening to combat rising rates.

3. What is the primary goal in managing chronic obstructive pulmonary disease (COPD)?

A. To eliminate symptoms

B. To prevent disease progression and improve quality of life

C. To reduce hospitalizations

D. To cure the disease

The primary goal in managing chronic obstructive pulmonary disease (COPD) is to prevent disease progression and improve quality of life. This approach recognizes that COPD is a chronic and progressive condition that currently has no cure. Therefore, management strategies focus on slowing the decline in lung function and minimizing the impact of symptoms on daily living. Preventing disease progression involves interventions such as smoking cessation, which is crucial for halting further damage to the lungs. Additionally, the use of bronchodilators and inhaled corticosteroids can help to ease symptoms like dyspnea and improve overall lung function. Managing exacerbations and comorbidities also plays a significant role in preserving the patient's functional status and well-being. Improving quality of life encompasses a holistic approach that includes managing breathlessness, enhancing activity levels, and providing patient education about self-management and coping strategies. This multifaceted management strategy can lead to increased patient satisfaction, better adherence to treatment plans, and an overall improvement in health outcomes. While reducing hospitalizations is an important aspect of COPD management and is often a result of successful treatment, it is a secondary goal rather than the primary aim. Similarly, eliminating symptoms is desirable but may not always be achievable, and the notion of curing the disease does not apply,

4. What capability signifies a development by a 5-year-old in self-care?

A. Brushing teeth

B. Choosing their outfit

C. Writing their name

D. Tying shoelaces

The capability that signifies a development in self-care by a 5-year-old is the ability to choose their outfit. By this age, children are typically developing a sense of independence and personal preferences, which includes the capacity to make choices about what they wear. This ability reflects not only motor skills but also cognitive development, as they start to understand the concepts of matching clothing and considering weather conditions. In contrast, while brushing teeth, writing their name, and tying shoelaces are also important skills, they do not necessarily represent the same level of self-care independence at this age. Brushing teeth might still require adult supervision, and although some children may begin to write their name around this age, it is not primarily a self-care skill. Tying shoelaces is often a more complex task that may not be fully mastered until around age 6 or 7.

5. Which bacteria is most commonly associated with causing meningitis?

A. Streptococcus pneumoniae

B. Escherichia coli

C. Staphylococcus aureus

D. Clostridium botulinum

Streptococcus pneumoniae is the most common bacterium associated with causing meningitis, particularly in adults and children over the age of two. This encapsulated gram-positive cocci is a leading cause of bacterial meningitis, particularly in the setting of respiratory infections such as pneumonia or otitis media, where the bacteria can spread to the meninges. The polysaccharide capsule of S. pneumoniae also plays a crucial role in its virulence, as it inhibits phagocytosis by the immune system, allowing the bacteria to evade immune responses and establish infection in the central nervous system. In contrast, while Escherichia coli can cause meningitis, especially in neonates due to it being part of the normal flora of the intestinal tract, it is less frequently responsible for meningitis in older populations. Staphylococcus aureus is more commonly associated with skin and soft tissue infections and can cause meningitis in specific contexts, such as post-surgical cases or in immunocompromised individuals, but it is not the most prevalent cause. Clostridium botulinum is primarily associated with botulism and does not commonly cause meningitis. Therefore, Streptococcus pneumoniae stands out as the most significant pathogen in the context of meningitis

6. What is the primary complication of untreated hypertension?

A. Stroke

B. Cardiovascular disease

C. Aortic dissection

D. Chronic kidney disease

The primary complication of untreated hypertension is cardiovascular disease. Chronic high blood pressure places excessive strain on the heart and blood vessels, leading to various cardiovascular issues. These can include coronary artery disease, heart failure, and left ventricular hypertrophy, which is an enlargement and thickening of the heart's walls due to the increased workload. Over time, untreated hypertension can damage the blood vessels and reduce their ability to regulate blood flow, contributing to the development of atherosclerosis—an accumulation of plaque in the arteries. This process narrows the arteries, making it easier for blockages to occur and increasing the risk of serious cardiovascular events. While strokes, aortic dissections, and chronic kidney disease are also serious complications that can arise from untreated hypertension, they are often seen as secondary consequences of the overarching cardiovascular problems. Addressing hypertension effectively reduces the overall risk of developing these severe complications.

7. What complication is most associated with intranasal steroid use?

A. Fungal infections

B. Systemic hypertension

C. Atrophy of mucosa

D. Weight gain

Intranasal steroid use is primarily associated with mucosal atrophy, which can occur as a side effect of prolonged local steroid use. Intranasal steroids are effective in reducing inflammation in the nasal passages, but steroid-induced atrophy can lead to thinning of the nasal mucosa over time. This can result in symptoms like nasal dryness, irritation, and potentially increased susceptibility to infections. The development of atrophy is due to the action of corticosteroids, which can inhibit cellular turnover and protein synthesis in the mucosal tissue, leading to a decrease in the mass of the mucosa. It's important to monitor patients using these medications for prolonged periods to ensure that they are not experiencing adverse effects related to mucosal health. The other options represent complications that are less commonly associated with intranasal steriod use. For instance, while fungal infections can occur with steroid use, they are more frequently seen with systemic steroid therapies or in immunocompromised individuals, rather than local intranasal use. Systemic hypertension and weight gain are more associated with systemic corticosteroid use rather than localized therapy via the intranasal route, as the systemic absorption is minimal when used correctly.

8. What is an expected finding on an EKG for a patient with hyperkalemia?

A. U waves

B. Flat T waves

C. Peaked T waves

D. Inverted QRS complexes

In the context of hyperkalemia, peaked T waves are a classic and expected finding on an electrocardiogram (EKG). Hyperkalemia refers to elevated potassium levels in the blood, which significantly impacts cardiac conduction and repolarization processes. As potassium levels rise, one of the first changes that can be observed on an EKG is the progressive peaking of the T waves. This is due to the alteration in the cardiac myocyte membrane potential caused by increased extracellular potassium, leading to a more rapid repolarization phase. The distinctive peaked T waves are often described as being sharply pointed and can be seen as an early indicator of hyperkalemia before other changes occur. Further progression of hyperkalemia can result in additional EKG changes, including widening of the QRS complex and eventually progression to a sine wave pattern or even ventricular fibrillation if left untreated. However, the presence of peaked T waves stands out as one of the initial manifestations that clinicians can correlate with the physiological impact of hyperkalemia. Other waveform abnormalities, such as U waves and flat T waves, can be indicative of different electrolyte imbalances or cardiac issues but are not specific to hyperkalemia. Inverted QRS complexes are also not characteristic of hyperkalemia,

9. In which population is the use of aspirin for primary prevention particularly considered?

A. Individuals aged 30-39 years with high cholesterol

B. Individuals aged 50-69 years with a 10-year cardiovascular risk of 10% or greater

C. Individuals aged 40-49 years with a family history of heart disease

D. Individuals aged 70 years and above

Using aspirin for primary prevention of cardiovascular disease is particularly considered in individuals aged 50-69 years with a 10-year cardiovascular risk of 10% or greater. This population is at a moderate risk for heart disease, and the benefits of aspirin in preventing first heart attacks or strokes can outweigh the risks of potential adverse effects, such as gastrointestinal bleeding. Clinical guidelines generally recommend initiating low-dose aspirin therapy in this age group, as studies have shown that it can significantly reduce the incidence of major cardiovascular events in those with established risk factors. The recommended cardiovascular risk thresholds help target individuals who are most likely to benefit from aspirin therapy while minimizing unnecessary treatment in those at lower risk, where the potential harms may outweigh the benefits. In contrast, options that involve younger individuals or those without significant risk factors may not have the same level of evidence supporting aspirin use for primary prevention, thus showing less benefit and possibly more risks. For instance, individuals aged 30-39 years or aged 40-49 years without clear cardiovascular risk do not generally meet the criteria for aspirin use, while individuals aged 70 and above may have different considerations based on their overall health status and risk profile at that age.

10. Which laboratory finding is associated with liver cirrhosis?

A. Low bilirubin levels

B. Low AST and ALT

C. Elevated AST and ALT

D. Normal alkaline phosphatase

Liver cirrhosis is characterized by extensive scarring of the liver and significant disruption to its normal function. A key feature of liver dysfunction is reflected in liver enzyme levels. In cases of cirrhosis, it is common to observe elevated levels of aspartate aminotransferase (AST) and alanine aminotransferase (ALT). These enzymes are released into the bloodstream in response to liver cell injury and are therefore markers of liver damage. While there may be fluctuations in AST and ALT levels throughout the progression of liver disease, early in cirrhosis, these enzymes can be elevated. Over time, as the liver becomes progressively scarred and loses functional hepatocytes, the levels of these enzymes can decrease, but they are often initially elevated due to ongoing liver injury before significant cell death occurs. The other provided laboratory findings either do not correlate with cirrhosis or are indicative of conditions that are not typical for cirrhosis, such as low bilirubin levels, which would suggest normal or decreased liver dysfunction. Therefore, the association of elevated AST and ALT levels with liver cirrhosis signifies ongoing liver injury and disruption in normal hepatic processes, making it the correct laboratory finding linked to this condition.