Certified Emergency Nurse (CEN) Practice Test (Sample)

Study Guide

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Questions

1. In which condition are paravertebral muscles spasming to force the trunk into hyperextension?

A. Opisthotonos

B. Akasthisia

C. Neuroleptic malignant syndrome

D. Torticollis

2. What is a subjective symptom of glaucoma?

A. Foggy looking vision

B. Sudden onset deep eye pain

C. Fixed pupil

D. Increased IOP

3. What is the initial approach to managing bradycardia with adequate perfusion?

A. Administer atropine immediately

B. Monitor the patient closely

C. Begin transcutaneous pacing

D. Start medication for rapid heart rate

4. What common side effects are associated with ACE inhibitors?

A. Dry cough and hyperkalemia

B. Weight gain and constipation

C. Dizziness and headaches

D. Nausea and vomiting

5. When are pacemakers most effectively utilized?

A. In cases of tachycardia

B. When the heart's pacemaking system is inadequate

C. In patients with high blood pressure

D. During hypertensive crises

6. What does malocclusion refer to?

- **A. Improper alignment of teeth**
- **B. Loss of teeth**
- **C. Decay of tooth enamel**
- **D. Infection in the gums**

7. What symptom may occur with thrombocytopenia due to minor trauma?

- **A. Fatigue**
- **B. Bruising**
- **C. Weight gain**
- **D. Pain in joints**

8. What is a common disorder related to decreased red blood cell production?

- **A. Polycythemia**
- **B. Thrombocythemia**
- **C. Anemia**
- **D. Hyperlipidemia**

9. What is an indication for dialysis in renal failure?

- **A. Elevated white blood cell count**
- **B. Stupor or coma**
- **C. Hypertension**
- **D. Hypotension**

10. What is the primary condition associated with elevated white blood cell count?

- **A. Leukopenia**
- **B. Leukocytosis**
- **C. Thrombocytopenia**
- **D. Thrombocytosis**

Answers

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

Explanations

1. In which condition are paravertebral muscles spasming to force the trunk into hyperextension?

A. Opisthotonos

B. Akasthisia

C. Neuroleptic malignant syndrome

D. Torticollis

Opisthotonos is a spasm of the back muscles that causes the trunk to arch backward, leading to a hyperextended position. This can occur as a protective mechanism in response to certain neurological conditions, such as meningitis or seizures, where muscle contraction forces the body into an exaggerated posture. In this state, the head and heels may touch the ground while the spine is elongated and arched, illustrating the characteristic hyperextension. In contrast, akathisia involves a subjective feeling of inner restlessness and an overwhelming need to be in constant motion, rather than a specific posture. Neuroleptic malignant syndrome (NMS) encompasses a severe reaction to antipsychotic medications, presenting with muscle rigidity, fever, and autonomic instability, but not necessarily the hyperextended posture seen in opisthotonos. Torticollis, on the other hand, is characterized by an abnormal, asymmetrical head or neck position without the pronounced hyperextension seen in opisthotonos.

2. What is a subjective symptom of glaucoma?

A. Foggy looking vision

B. Sudden onset deep eye pain

C. Fixed pupil

D. Increased IOP

The correct choice highlights a subjective symptom of glaucoma, which is characterized by the patient's personal experience of discomfort or pain. Sudden onset deep eye pain is a symptom reported by patients that suggests an acute change in their eye condition, such as high intraocular pressure or acute angle-closure glaucoma. Subjective symptoms are those that cannot be measured directly by a healthcare provider but are described by patients regarding their feelings or perceptions. In this case, the deep eye pain is an experience only the patient can report, which is paramount in an emergency setting as it directs the clinician's attention toward potentially serious complications of glaucoma. The other options represent objective findings or measurements. Foggy looking vision can be a symptom related to glaucoma but is often less immediately alarming than deep eye pain. A fixed pupil signifies a physiological change that can be assessed during an examination. Increased intraocular pressure (IOP) is measured via tonometry and indicates the disease's status but is not something the patient experiences subjectively. Thus, these options do not fall under the subjective symptom classification, confirming the correct response.

3. What is the initial approach to managing bradycardia with adequate perfusion?

A. Administer atropine immediately

B. Monitor the patient closely

C. Begin transcutaneous pacing

D. Start medication for rapid heart rate

In the case of bradycardia with adequate perfusion, closely monitoring the patient is the most appropriate initial approach. Adequate perfusion indicates that the patient is stable despite the low heart rate, and immediate interventions such as medication or pacing are not necessarily required at this stage. By monitoring the patient closely, the healthcare provider can assess vital signs, watch for any changes in condition, and prepare for possible interventions if the situation worsens. This approach prioritizes patient safety and is in line with the guidelines that suggest intervention when symptoms of poor perfusion are present rather than when the heart rate alone is low. Other approaches, such as administering atropine or starting transcutaneous pacing, might be warranted if the patient were to develop symptoms or if there were evidence of hemodynamic instability. However, since the patient currently has adequate perfusion, these actions would not be the first line of defense. Similarly, initiating treatment for rapid heart rate would not apply in cases of bradycardia, where the heart rate is low, not elevated.

4. What common side effects are associated with ACE inhibitors?

A. Dry cough and hyperkalemia

B. Weight gain and constipation

C. Dizziness and headaches

D. Nausea and vomiting

ACE inhibitors, or angiotensin-converting enzyme inhibitors, are commonly used in the management of hypertension and heart failure. A notable and common side effect of these medications is a dry cough. This occurs due to increased levels of bradykinin, a substance that can accumulate when ACE is inhibited. The cough can be bothersome enough for some patients to discontinue use of the medication. Additionally, ACE inhibitors can lead to hyperkalemia, which is an elevation in potassium levels in the blood. This occurs because they prevent the conversion of angiotensin I to angiotensin II, ultimately resulting in reduced aldosterone secretion. Aldosterone is a hormone that helps regulate potassium levels, and its decrease can lead to retention of potassium, resulting in hyperkalemia. The other side effects listed in the other choices do not typically relate to ACE inhibitors. Weight gain and constipation are not common effects associated with this class of medications. Dizziness and headaches can occur with many medications but are not specifically recognized as hallmark side effects of ACE inhibitors. Nausea and vomiting, while possible side effects of many medications, are not primarily associated with ACE inhibitors either. Thus, the identification of dry cough and hyperkalemia as common side effects accurately reflects what practitioners should monitor

5. When are pacemakers most effectively utilized?

A. In cases of tachycardia

B. When the heart's pacemaking system is inadequate

C. In patients with high blood pressure

D. During hypertensive crises

Pacemakers are most effectively utilized when the heart's natural pacemaking system is inadequate. This can occur in various conditions such as bradycardia, heart block, or other dysfunctions of the heart's electrical conduction system. In these scenarios, the heart may not generate enough electrical impulses to maintain an adequate heart rate, leading to symptoms such as fatigue, dizziness, or even syncope. The pacemaker serves as an artificial source of electrical impulses, ensuring that the heart beats at a proper rate and rhythm, thereby enhancing blood flow and oxygen delivery to vital organs. In contrast, using pacemakers in situations such as tachycardia may not address the underlying issue, as tachycardia typically involves an excessive heart rate caused by other factors that are not related to the pacemaking system. High blood pressure and hypertensive crises are primarily related to vascular issues rather than intrinsic electrical conduction problems; thus, they do not directly indicate the need for a pacemaker.

6. What does malocclusion refer to?

A. Improper alignment of teeth

B. Loss of teeth

C. Decay of tooth enamel

D. Infection in the gums

Malocclusion refers specifically to the improper alignment of teeth and how the upper and lower jaws fit together. This condition can manifest in various forms, such as overcrowding, gaps between teeth, or misaligned bites (overbite, underbite, crossbite, etc.). It's important because malocclusion can lead to significant oral health issues, including difficulty in chewing, increased risk of tooth decay, and jaw pain or discomfort. While the other options mention aspects of dental health, they do not accurately define malocclusion. For example, loss of teeth pertains to tooth loss due to various reasons such as decay or periodontal disease, while decay of tooth enamel focuses on the deterioration of the tooth surface. Infection in the gums relates to periodontal issues. Thus, the context and implications of malocclusion emphasize the importance of proper teeth alignment, distinguishing it from these other dental concerns.

7. What symptom may occur with thrombocytopenia due to minor trauma?

A. Fatigue

B. Bruising

C. Weight gain

D. Pain in joints

Bruising is a common symptom that may occur with thrombocytopenia, particularly following minor trauma. Thrombocytopenia, which is a condition characterized by a low platelet count, can lead to increased bleeding tendencies. When the skin or underlying blood vessels are injured, even slightly, the lack of sufficient platelets makes it harder for the body to form clots, resulting in the appearance of bruises. Patients with thrombocytopenia may notice this bruising occurring more readily after minimal or no apparent trauma, as their blood's capacity to stop bleeding is compromised. This symptom is particularly notable because the bruising can appear larger or more pronounced than what one might expect given the slight trauma—this signifies that the body's normal response to injury is impaired. Other symptoms like fatigue, weight gain, or joint pain do not directly correlate with the situation of experiencing minor trauma in the context of thrombocytopenia. Fatigue can be present in various medical conditions but isn't specifically linked to minor trauma in this scenario. Weight gain is unrelated to thrombocytopenia and tends to connect more to metabolic or dietary issues. Joint pain, while it may be a standalone symptom or associated with other underlying conditions, does not typically arise specifically from minor trauma related to low

8. What is a common disorder related to decreased red blood cell production?

A. Polycythemia

B. Thrombocythemia

C. Anemia

D. Hyperlipidemia

A common disorder related to decreased red blood cell production is anemia. This condition occurs when the body either produces insufficient amounts of red blood cells or when the existing red blood cells are destroyed faster than they can be produced. Anemia can arise from various causes, including deficiencies in iron, vitamin B12, or folate, bone marrow disorders, chronic diseases, or genetic conditions. In this context, anemia is characterized by symptoms such as fatigue, weakness, pallor, and shortness of breath, which result from a reduced oxygen-carrying capacity of the blood due to the lower-than-normal number of red blood cells. Other disorders listed are related to different mechanisms: polycythemia involves an increased production of red blood cells; thrombocythemia pertains to elevated platelet counts; and hyperlipidemia is a condition marked by high levels of lipids in the blood. These conditions do not pertain to the decreased production of red blood cells, making anemia the correct response.

9. What is an indication for dialysis in renal failure?

A. Elevated white blood cell count

B. Stupor or coma

C. Hypertension

D. Hypotension

Dialysis is indicated in renal failure when there is a buildup of toxins and waste products in the blood that the kidneys can no longer filter adequately. Stupor or coma suggests severe metabolic derangement, often due to the accumulation of uremic toxins, such as urea and creatinine, which can lead to altered mental status. This is a critical condition that necessitates the use of dialysis to correct electrolyte imbalances, remove toxins, and restore proper physiological function. In contrast, while elevated white blood cell count could indicate an infection, which may require treatment, it is not a direct indication for dialysis. Hypertension may occur in renal failure but is typically managed with medications rather than dialysis unless it is resistant and associated with fluid overload. Hypotension can complicate certain scenarios in patients with renal failure but does not serve as a primary reason for initiating dialysis. Therefore, the presence of stupor or coma is the clearest and most urgent indication for initiating dialysis to prevent further metabolic and neurological compromise.

10. What is the primary condition associated with elevated white blood cell count?

A. Leukopenia

B. Leukocytosis

C. Thrombocytopenia

D. Thrombocytosis

The condition associated with an elevated white blood cell count is leukocytosis. This occurs when there is an increase in the number of white blood cells in the bloodstream, which can result from various factors like infections, inflammation, stress, or other medical conditions. A heightened white blood cell count is essentially a protective response, indicating that the body is fighting off an infection or dealing with another stressor. Leukopenia, on the other hand, refers to a decreased white blood cell count, which can lead to increased susceptibility to infections. Thrombocytopenia relates to a low platelet count, which is not directly associated with white blood cell counts. Meanwhile, thrombocytosis pertains to an increased platelet count, which also does not imply an elevated white blood cell count. Therefore, the identification of leukocytosis as the condition characterized by elevated white blood cell counts is essential in understanding hematological responses to various physiological and pathological processes.