NCLEX Neurologic and Sensory Systems Practice Exam (Sample)

Study Guide

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Questions

1. **What condition is treated with anticholinergic medications?**
   - **A. Alzheimer's disease**
   - **B. Multiple sclerosis**
   - **C. Parkinson's disease**
   - **D. Huntington's disease**

2. **In a client with stage 3 Parkinson's disease, which clinical manifestations are expected?**
   - **A. Akinesia**
   - **B. Masklike face**
   - **C. Postural instability**
   - **D. Increased gait disturbances**

3. **After a craniotomy, what clinical indicators should the nurse monitor for inappropriate ADH secretion?**
   - **A. Polyuria**
   - **B. Increased weight**
   - **C. Decreased serum sodium**
   - **D. Decreased level of consciousness**

4. **Which nursing action supports cognitive ability in clients with Alzheimer disease?**
   - **A. Encouraging caregivers to support safe independence**
   - **B. Using calendars, clocks, and pictures to support memory**
   - **C. Providing a limited number of choices to support decision-making**
   - **D. Quizzing the client regularly to assess orientation**

5. **Which finding is indicative of increased intracranial pressure?**
   - **A. Decreased heart rate**
   - **B. Elevated blood pressure**
   - **C. Clear mental status**
   - **D. Increased respiratory rate**

6. With right side brain damage from a stroke, which of the following may also be expected?

A. Aware of limitations

B. Confusion on date, time, and place

C. Short attention span

D. Impulsive

7. Which of the following management strategies might be used for a patient with increased ICP?

A. Use of hypotonic fluids

B. Hyperosmotic diuretics

C. Increased sedatives

D. Fluid restriction

8. What is a possible complication of untreated meningitis?

A. Muscle spasms

B. Permanent neurological damage or death

C. Visual disturbances

D. Decreased reflexes

9. Name a common sign of a frontal lobe tumor.

A. Vision problems

B. Severe headaches

C. Changes in personality or behavior

D. Loss of motor control

10. What condition describes progressive demyelination of nerve fibers?

A. Pernicious Anemia

B. Multiple Sclerosis

C. Neuropathy

D. Amyotrophic Lateral Sclerosis

Answers

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

Explanations

1. What condition is treated with anticholinergic medications?

A. Alzheimer's disease

B. Multiple sclerosis

C. Parkinson's disease

D. Huntington's disease

Anticholinergic medications are primarily used in the treatment of Parkinson's disease, which is characterized by a deficiency of dopamine in the brain. In this condition, patients often experience tremors, rigidity, Bradykinesia (slowed movement), and other motor symptoms. The rationale for using anticholinergic drugs lies in their ability to balance neurotransmitters in the brain. In Parkinson's disease, the loss of dopaminergic activity leads to an increase in cholinergic activity, which contributes to the motor symptoms of the disease. By blocking the action of acetylcholine, the principal neurotransmitter affected, these medications help to reduce tremors and improve muscle control and coordination. Unlike conditions such as Alzheimer's disease, where cholinesterase inhibitors are primarily used to increase acetylcholine levels, or multiple sclerosis and Huntington's disease, where other classes of medications are more appropriate, the specific need to manage the cholinergic dominance in Parkinson's makes anticholinergic medications a suitable treatment option for this particular condition.

2. In a client with stage 3 Parkinson's disease, which clinical manifestations are expected?

A. Akinesia

B. Masklike face

C. Postural instability

D. Increased gait disturbances

In stage 3 Parkinson's disease, postural instability becomes a significant feature. This stage is characterized by a moderate level of impairment in motor functioning, where clients begin to experience difficulties with balance and the ability to maintain posture. The loss of postural reflexes puts patients at risk for falls, which is a crucial element of care in managing Parkinson's disease. While akinesia, or the inability to initiate movement, can also be present, it is more often observed in later stages, and the hallmark of stage 3 is the prominence of postural instability. The masklike face is a non-motor symptom that can develop earlier in the disease progression, and although gait disturbances are occurring, they are generally considered to have increased significantly in this stage but are a consequence of mobility issues rather than a defining characteristic. Thus, postural instability stands out as a defining manifestation in the context of stage 3 Parkinson's disease.

3. After a craniotomy, what clinical indicators should the nurse monitor for inappropriate ADH secretion?

A. Polyuria

B. Increased weight

C. Decreased serum sodium

D. Decreased level of consciousness

Inappropriate secretion of antidiuretic hormone (ADH), often referred to as syndrome of inappropriate ADH secretion (SIADH), can occur following a craniotomy due to various factors, including trauma, surgery, or other neurological conditions. In this case, monitoring for decreased serum sodium is crucial because SIADH leads to water retention, which dilutes the serum sodium levels, resulting in hyponatremia. When ADH is secreted inappropriately, the kidneys retain water, causing an increased volume of fluid in the bloodstream, but without the corresponding increase in sodium. This dilution effect directly leads to a decrease in serum sodium concentration. Since sodium plays a vital role in maintaining cellular function and balance, a drop in serum sodium can have significant neurological implications, including confusion, seizures, or even coma in severe cases. While increased weight can occur due to fluid retention associated with SIADH, it is a less direct indicator than serum sodium levels. Decreased level of consciousness can also occur when serum sodium drops significantly, but it is not an early clinical indicator and represents a secondary effect rather than a direct manifestation of inappropriate ADH secretion. Polyuria typically occurs in conditions like diabetes insipidus, which is characterized by low

4. Which nursing action supports cognitive ability in clients with Alzheimer disease?

A. Encouraging caregivers to support safe independence

B. Using calendars, clocks, and pictures to support memory

C. Providing a limited number of choices to support decision-making

D. Quizzing the client regularly to assess orientation

Encouraging caregivers to support safe independence is a vital nursing action that promotes cognitive ability in clients with Alzheimer disease. Fostering independence can enhance a patient's self-esteem and promote mental engagement, which are crucial for cognitive functioning. When caregivers are encouraged to facilitate safe independence, it allows the client to engage with their environment, make personal choices, and perform tasks that they are still capable of managing. This approach acknowledges the client's remaining abilities and helps maintain their dignity, contributing to overall cognitive health. In this context, supporting Independence means creating opportunities for clients to participate in daily activities as much as possible while ensuring their safety. This process can help stimulate their cognitive processes and reinforce memories and skills that they may still possess, thereby slowing cognitive decline and improving quality of life. This action emphasizes a balance of support and independence, which is fundamental in the care of individuals with Alzheimer's, instead of restricting their activities or over-managing their care, which could lead to feelings of frustration or helplessness.

5. Which finding is indicative of increased intracranial pressure?

A. Decreased heart rate

B. Elevated blood pressure

C. Clear mental status

D. Increased respiratory rate

Elevated blood pressure is indicative of increased intracranial pressure because, as pressure within the cranial cavity rises, the body attempts to maintain adequate cerebral perfusion. One of the physiological responses to elevated intracranial pressure is the Cushing's triad, which includes hypertension (elevated blood pressure), irregular respirations, and bradycardia (decreased heart rate). The increase in blood pressure compensates for the reduced blood flow to the brain due to pressure on the cerebral vessels. Another relevant aspect is that elevated blood pressure can trigger other systemic responses, and it is an important sign for healthcare providers to monitor in patients who may have impaired intracranial dynamics. The body's compensatory mechanisms may also involve changes to heart rate and respiratory patterns, which further signifies the disturbance in normal intracranial function. Recognizing elevated blood pressure in the context of possible increased intracranial pressure is crucial for prompt assessment and intervention in critical care settings.

6. With right side brain damage from a stroke, which of the following may also be expected?

A. Aware of limitations

B. Confusion on date, time, and place

C. Short attention span

D. Impulsive

When there is damage to the right side of the brain, particularly as a result of a stroke, various cognitive and behavioral changes can occur. The correct response regarding impulsivity relates to the functions primarily controlled by the right hemisphere. The right hemisphere is implicated in non-verbal communication, spatial awareness, and impulsive behavior regulation. Individuals with right-sided brain damage often exhibit a lack of insight into their conditions, leading to impulsive actions without considering the consequences. In this context, impulsivity can manifest as engaging in risky behavior, difficulty with self-control, or making decisions without fully evaluating the situation. This can be particularly challenging for caregivers and healthcare providers, as it may lead to safety concerns for the individual. In contrast, other choices may allude to deficits more commonly associated with damage to the left side of the brain or to other types of cognitive dysfunctions that do not necessarily correlate with right hemisphere stroke effects. For instance, awareness of limitations is often more indicative of left hemisphere damage where individuals may have greater insight into their condition. Confusion about date, time, and place is aligned with the disorientation seen in cognitive impairments more frequently associated with broader neurological damage. A short attention span may also connect to various cognitive impairments but is distinct from

7. Which of the following management strategies might be used for a patient with increased ICP?

A. Use of hypotonic fluids

B. Hyperosmotic diuretics

C. Increased sedatives

D. Fluid restriction

The use of hyperosmotic diuretics, such as mannitol or hypertonic saline, is an effective management strategy for patients with increased intracranial pressure (ICP). These agents work by creating an osmotic gradient that draws fluid out of the cerebral tissue and into the vascular compartment. This process reduces the volume of fluid within the brain, thereby decreasing ICP. By effectively lowering cerebral edema, hyperosmotic diuretics help to maintain cerebral perfusion pressure and protect the brain from further injury. This intervention is particularly crucial in clinical scenarios where rapid reduction of ICP is necessary, such as after a traumatic brain injury or in cases of cerebral hemorrhage. The effectiveness of hyperosmotic diuretics in promoting osmotic diuresis and reducing ICP is well-documented, making this management strategy a cornerstone in the care of patients experiencing elevated ICP. The other options, although relevant in different contexts, do not specifically address the immediate need to reduce elevated ICP effectively. For instance, while fluid restriction can be part of a broader management plan, it does not directly decrease ICP and might even worsen the situation in certain cases if the patient becomes dehydrated. Similarly, increasing sedatives can lead to respiratory depression, which is counterproductive when

8. What is a possible complication of untreated meningitis?

A. Muscle spasms

B. Permanent neurological damage or death

C. Visual disturbances

D. Decreased reflexes

Untreated meningitis can lead to severe complications, one of which is permanent neurological damage or death. Meningitis, an inflammation of the protective membranes covering the brain and spinal cord, can result in significant damage due to the infection. The inflammation can affect brain tissue, leading to complications such as seizures, hearing loss, cognitive deficits, and even coma. In severe cases, the condition can be fatal if not treated promptly. The risk of permanent neurological damage arises because of the critical nature of the central nervous system; any inflammation or infection can disrupt normal function and lead to lasting effects. Therefore, timely intervention with appropriate antibiotics and medical support is essential to minimize the risk of these serious outcomes.

9. Name a common sign of a frontal lobe tumor.

A. Vision problems

B. Severe headaches

C. Changes in personality or behavior

D. Loss of motor control

A common sign of a frontal lobe tumor is changes in personality or behavior due to the role of the frontal lobe in regulating emotions, decision-making, and social interactions. The frontal lobe is integral to personal insight, impulse control, and reasoning, which means that any disruption in its function, such as from a tumor, can lead to noticeable alterations in how a person thinks, behaves, and interacts with others. Individuals may display impulsivity, mood swings, irritability, or withdrawal, as they lose the ability to self-regulate their behavior. Other signs can be associated with frontal lobe tumors, but the distinctive impact on personality and behavior often stands out as a key symptom. This change can sometimes be misinterpreted or attributed to other factors, making it critical for healthcare providers to assess neurological function carefully when personality changes are observed.

10. What condition describes progressive demyelination of nerve fibers?

A. Pernicious Anemia

B. Multiple Sclerosis

C. Neuropathy

D. Amyotrophic Lateral Sclerosis

The condition that describes progressive demyelination of nerve fibers is Multiple Sclerosis (MS). In Multiple Sclerosis, the immune system mistakenly attacks the protective myelin sheath surrounding nerve fibers in the central nervous system (CNS), which includes the brain and spinal cord. This demyelination leads to disruptions in communication between the brain and the rest of the body, resulting in a variety of neurological symptoms such as weakness, numbness, coordination difficulties, and visual disturbances. The progressive nature of MS means that over time, as more myelin is damaged, the symptoms can worsen and result in increasing disability. Understanding that MS specifically involves the demyelination process is crucial for recognizing its unique pathophysiology compared to other neurological conditions.