Care CEUs

Recognizing Alzheimer’s and Delivering Effective Care

1. A neuropathology report on a deceased 79-year-old woman describes widespread amyloid-? plaques and neurofibrillary tangles with neuronal loss in the basal forebrain and neocortex, along with a history of progressive memory loss that interfered with daily life. Which diagnosis best fits these findings?

A. Normal age-related cognitive change, which involves mild memory lapses without large-scale neuronal loss or disruptive daily impairment
B. Vascular dementia, caused primarily by multiple ischemic infarcts without characteristic amyloid-? plaques
C. Frontotemporal dementia, typically presenting with early personality change and focal frontal and temporal lobe atrophy without predominant amyloid pathology
D. Alzheimer’s disease, the most common type of dementia characterized by amyloid plaques and tau neurofibrillary tangles with neuronal loss

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2. According to the widely accepted amyloid hypothesis of Alzheimer’s disease, which mechanism most directly initiates the neuronal toxicity that leads to neurodegeneration?

A. Specific enzymes cleave amyloid precursor protein, producing amyloid-? peptides that accumulate as toxic plaques in the brain
B. A primary deficit in acetylcholine production alone, without involvement of amyloid precursor protein processing, leads to synaptic failure
C. Hyperphosphorylated tau proteins independently cause neurodegeneration without any contribution from amyloid-?
D. Chronic cerebral ischemia from long-standing hypertension directly destroys neurons without involving abnormal protein aggregation

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3. A 67-year-old patient with obesity, hypertension, type 2 diabetes, and a diet high in ultra-processed foods asks how to reduce their risk of Alzheimer’s disease. Based on current evidence, which strategy best targets modifiable risk factors for this condition?

A. Relying on moderate alcohol intake and ignoring cardiovascular risk factors because alcohol has been associated with reduced incidence at low doses
B. Focusing primarily on genetic testing for APOE status and assuming lifestyle will have limited impact on dementia risk
C. Improving cardiovascular health through blood pressure and lipid control, weight loss, better glycemic control, increased physical activity, and reducing ultra-processed foods
D. Accepting that age-related risk is dominant and concentrating on supplements rather than changing diet, activity, or cardiometabolic control

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4. Which scenario reflects a pattern of Alzheimer's disease risk that is most strongly supported by current genetic evidence?

A. An individual with two copies of the APOE e4 allele and multiple first-degree relatives, including two siblings with late-onset Alzheimer's disease
B. An individual with no affected relatives but a distant cousin who developed early-onset dementia of unclear etiology
C. An individual with a single APOE e4 allele but no family history and excellent cardiovascular health throughout life
D. An individual with no known APOE e4 alleles but mildly elevated LDL cholesterol in midlife and no relatives with dementia

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5. Which of the following presentations is most consistent with normal age-related memory change rather than early Alzheimer's disease?

A. Repeatedly asking the same questions because the answers are not retained and getting lost while driving familiar routes
B. Occasionally misplacing car keys or briefly struggling to recall a word but later remembering it, with preserved ability to manage bills and navigate familiar routes
C. Failing to pay utility bills for several consecutive months and needing a family member to assume financial responsibilities
D. Frequently losing track of dates and sometimes being unsure of current location during routine daily activities

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6. A 79-year-old with a diagnosis of dementia now needs help with personal care, frequently forgets recent events and parts of personal history, withdraws from social activities, shows a shortened attention span, and has developed hallucinations and agitation, especially in the late afternoon. Which stage of Alzheimer's disease do these features most closely represent?

A. Severe Alzheimer's disease, typically associated with complete dependence, inability to communicate, and loss of awareness of environment
B. Mild Alzheimer's disease characterized by subtle memory changes that do not yet require significant assistance with daily care
C. Preclinical Alzheimer's disease, in which there are brain changes but no observable cognitive or behavioral symptoms
D. Moderate Alzheimer's disease with increased confusion, neuropsychiatric symptoms, and the need for more intensive supervision

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7. A busy primary care clinic wants to improve early identification of cognitive decline among older adults. Which approach best reflects evidence-based use of screening tools described in the course content?

A. Reserve all cognitive assessment for neurology specialists and avoid screening in primary care to prevent over-referral

B. Use the clock-drawing test alone as a definitive diagnostic test for Alzheimer's disease in all older adults
C. Rely solely on family members' subjective concerns without any structured cognitive screening because detailed tests are time-consuming
D. Incorporate a brief tool such as the Mini-Cog, MiniMoCA, or Rapid Cognitive Screen to quickly identify patients needing more comprehensive cognitive assessment

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8. A 74-year-old with suspected Alzheimer's disease presents with new memory loss and functional decline. The clinician wants to both rule out alternative causes and support a diagnosis of Alzheimer's disease, taking into account recent advances. Which diagnostic strategy best aligns with current evidence?

A. Perform lumbar puncture and CSF testing for every patient with mild cognitive symptoms, without other screening or history
B. Rely solely on a clock-drawing test and caregiver interview, avoiding laboratory or imaging studies unless symptoms become severe
C. Obtain thorough history, physical and mental status exam, basic lab work and neuroimaging, and consider a blood test measuring amyloid-? and tau proteins approved for symptomatic patients over 55
D. Order PET imaging as the first-line test for all older adults, without using cognitive screening or basic laboratory evaluation

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9. A patient with moderate Alzheimer's disease has increasing agitation, delusions, and functional decline. Which pharmacologic plan is most consistent with evidence-based treatment principles described in the course?

A. Start a tricyclic antidepressant as first-line therapy for mood symptoms because its anticholinergic effects may improve sleep and behavior
B. Use a cholinesterase inhibitor to slow cognitive decline, add memantine to reduce glutamate-induced excitotoxicity, and select antidepressants or antipsychotics that avoid tricyclic agents with anticholinergic activity
C. Avoid cholinesterase inhibitors because they do not influence activities of daily living and rely solely on sedating antipsychotics for behavioral control
D. Use memantine alone to treat all cognitive and behavioral aspects of Alzheimer's disease and avoid combination therapy

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10. A nurse is planning care for a hospitalized patient with moderate Alzheimer's disease who becomes agitated when confused. Which set of nursing interventions best reflects the evidence-based role of nurses in promoting optimal outcomes?

A. Limit family visits to reduce environmental input, communicate primarily through the intercom system, and remove mobility aids to prevent wandering
B. Frequently change the patient's room to increase stimulation, ask detailed questions about past events to test memory, and keep the television on loudly to prevent social isolation
C. Approach the patient from the front, use eye contact and short simple sentences, minimize distracting noise, ensure access to glasses and hearing aids, avoid quizzing memory, maintain

consistent staff and routines, and closely monitor for pain and changes in behavior
D. Assume that decreased verbal ability means the patient is unaware of the environment, focus nursing care only on physical tasks, and defer all education to the physician and social worker

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