American Academy of Neurology
Behavioral Neurology Section
Resident Core Curriculum

11/17/00

1. Neurobiological Basis of Behavior:

    - Organization of the cerebral cortex, white matter tracts, basal ganglia, thalamus, hypothalamus, hippocampus, amygdala, and brainstem.

    - Behaviorally-relevant cortico-cortical and cortical-subcortical functional circuitry.

    - Cerebral hemispheric specialization; localization and lateralization of function.

    - Neurodevelopmental aspects of cognition and behavior.

    - Clinical applications of structural and functional neuroimaging methodologies.

    - Distribution, metabolism, and functional significance of local circuit (amino acid) and modulatory (cholinergic and monoaminergic) neurotransmitter systems.

2. Neurobehavioral Syndromes:

    - Description and classification of recognized neurobehavioral syndromes including amnesia, aphasia, agnosia, apraxia, executive dysfunction, unilateral neglect, and visuospatial disturbances, delirium and dementia.

    - Knowledge of relevant neuroanatomy, pathophysiology, and potential etiologies (neurodegenerative, cerebrovascular, multiple sclerosis, traumatic brain injury, hydrocephalus, brain tumors, CNS infections, and toxic-metabolic encephalopathies).

    - Core clinical manifestations, natural history, epidemiology, and putative neurological substrates of affective, psychotic, anxiety, personality, obsessive-compulsive, impulse control, and factitious disorders.

3. Neurobehavioral and Mental Status Examination:

    - Supervised instruction in executing, recording, and interpreting a standardized mental status examination, including the assessment of comportment, attention, language, memory, visuospatial skills, executive functions, calculations, and abstraction.

- Instruction in the anatomic correlates and differential diagnosis of disturbances in these functions.

- Instruction in the clinical neuropsychiatric assessment and criteria for classification of depression, mania, psychosis, anxiety, personality disorders, substance abuse, conversion disorder, and obsessive-compulsive disorder; determining the severity of the disorder and the urgency of the need for treatment.

4. Neuropsychopharmacology and Patient Management:

- Instruction regarding the indications, contraindications, drug interactions, and adverse side effects of the major agents used to treat neurobehavioral disorders and their underlying etiologies including anticonvulsants, anti-parkinsonian agents, platelet anti-aggregants, anticoagulants, antioxidants, antipsychotic agents, antidepressants, anxiolytics, psychostimulants, analgesics, and antidementia drugs.

- Instruction and/or experience in the pharmacologic management of:

  - Neurobehavioral and other manifestations of the major neurologic disorders including epilepsy, Parkinson's disease, Alzheimer's disease, Wilson's disease, Huntington's disease, frontotemporal dementias, traumatic brain injury, stroke, and multiple sclerosis.
  - Major behavioral disorders including depression, psychosis, anxiety, obsessive-compulsive disorder, and agitation, including management of the acutely agitated patient and non-neuroleptic alternatives to managing agitation and aggression.
  - Disorders such as substance abuse, attention deficit disorder, developmental disabilities, and sleep disorders.

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Behavioral Neurology Section