American Board of Physical Medicine and Rehabilitation

Brain Injury Medicine Examination Outline

Approximate Target Weights

Class I: Type of Problem/Organ System

A. Traumatic brain injury by severity (15%)
   1. Mild (concussion)
      a. Sports
      b. Nonsports
      c. Repetitive
   2. Moderate
   3. Severe
      a. Coma
      b. Minimally conscious
      c. Vegetative state
   4. Brain death

B. Traumatic brain injury by pattern (7%)
   1. Penetrating
   2. Closed
      a. Focal
      b. Diffuse axonal injury
      c. Brainstem
      d. Other
   3. Nonaccidental trauma
   4. Blast injury

C. Other neurologic disorders (12%)
   1. Dual diagnosis – TBI and spinal cord injury
   2. Ischemia
   3. Hemorrhage
   4. Anoxia
   5. Infectious
   6. Autoimmune
   7. Endocrine/metabolic syndromes
   8. Tumor
   9. Other

D. Systemic manifestations (19%)
   1. Cardiovascular
      a. Cardiac disorders
      b. Vascular disorders/injury
      c. Hypertension/autonomic dysfunction
      d. Other
   2. Pulmonary
      a. Pneumonia
      b. Tracheostomy care
      c. Other
   3. GU/GI
      a. Bladder
      b. Bowel
      c. Sexuality/reproduction
      d. Other
   4. Soft tissue and orthopedic conditions
      a. Heterotopic ossification
      b. Fractures
      c. Cervical sprains/strains/radiculopathies/plexopathies
      d. Tendinitis/bursitis
      e. Other
      f. Endocrine/metabolic/hormonal
      g. Nutrition issues

E. Rehabilitation problems and outcomes (40%)
   1. Neurological complications
      a. Spasticity
      b. Hydrocephalus
      c. Seizures
      d. Posture and balance disorders
      e. Movement disorders
      f. Gait disorders
      g. Dysphagia and aspiration
      h. Paralysis and weakness
      i. Other
   2. Physical complications
      a. Contracture
      b. Pressure ulcers
      c. Bed rest and deconditioning
      d. Fatigue
   3. Cognitive and sensory dysfunction
      a. Executive function
      b. Speech and language
      c. Hearing impairment
      d. Anosmia
      e. Vestibular dysfunction
      f. Visual dysfunction
      g. Attention/memory/amnesia
      h. Agnosia
      i. Sleep disorders
      j. Other cognitive
   4. Behavioral disorders
      a. Impulse control (inc sexuality, violence, aggression)
      b. Agitation/restlessness
      c. Lability
      d. Apathy
   5. Psychiatric/psychological
      a. Mood disorders
      b. Substance abuse
      c. Dementia or pseudodementia
      d. Posttraumatic stress disorder
      e. Other psych (inc suicide, personality disorders, anxiety)
   6. Pain
      a. Headache
      b. Complex regional pain syndrome
      c. Myofascial pain
      d. Other
   7. Other

F. Basic science (7%)
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Brain Injury Medicine Examination Outline, page 2
Class II: Focus of Question/Patient Management

A. Patient evaluation and diagnosis (28%)
   1. Physical examination, signs, and symptoms
   2. Diagnosis and etiology
   3. Diagnostic procedures
      a. Gait analysis
      b. Lab studies
      c. Cerebrospinal fluid analysis
      d. Neuroimaging
      e. Musculoskeletal and other imaging
      f. Other
   4. Functional evaluation
      a. Assessment scales
      b. Outcome and functional scales
      c. Neuropsychological testing
   5. Electrodiagnosis
      a. Electroencephalogram
      b. Evoked potentials
      c. Peripheral nerve testing

B. Prognosis/risk factors (12%)
   1. Premorbid
   2. Injury-related
   3. Treatment-related (inc safety)

C. Patient management (50%)
   1. Clinical decision-making
   2. Physical agents
   3. Therapeutic exercise
      a. Motor control
      b. Mobility and range of motion
      c. Strength and endurance
      d. Functional electrical stimulation
      e. Exercise/activity
      f. Other
   4. Pharmacologic interventions
      a. Analgesics
      b. Anticonvulsants
      c. Antispasticity agents (oral, IM)
      d. Antibiotics
      e. Sedatives/hypnotics
      f. Stimulants
      g. Antidepressants
      h. Antipsychotics
      i. Anxiolytics, mood stabilizers
      j. Cognitive enhancers
      k. Antifatigue agents
      l. Other
   5. Procedural/interventional
      a. Intracranial pressure monitoring
      b. Surgery
      c. Neuromodulation (inc intrathecal therapies and central/peripheral nervous system stimulation)
      d. Other
   6. Equipment and assistive technology
      a. Assistive technology (inc augmentative communication, environmental controls)
      b. Orthoses, casting, splinting
      c. Mobility aids
   7. Behavioral/psychological/environmental
      a. Behavioral modification
      b. Psychotherapy/counseling
      c. Family issues (inc parenting)
      d. Cognitive rehabilitation therapy
      e. Biofeedback
      f. Environmental modification
      g. Other
   8. Reintegration
      a. Vocational
      b. Educational
      c. Avocational
      d. Resource allocation
      e. Family systems
      f. Driving
      g. Other
   9. Complementary/alternative therapies
   10. Ethics, legal, capacity issues, advocacy

D. Applied science (10%)
   1. Anatomy
      a. Cortex
      b. Subcortical
      c. Brainstem/cranial nerves
      d. Cerebellum
      e. Peripheral nerves
      f. Musculoskeletal
      g. Other
   2. Physiology
   3. Pathology
   4. Kinesiology and biomechanics
   5. Genetics, biomarkers, and proteomics
   6. Epidemiology and public health/prevention
   7. Nutrition
   8. Research and statistics
   9. Growth, development, and aging
   10. Other

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