TBI CLINICAL DEFICITS

Dept. of Speech Pathology
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2 Symptoms
- No prototype
- Damage generally diffuse affecting many brain functions
- Severity
  - Mild - walking wounded
  - Severe - coma

3 Physical Symptoms
- Nonneurologic - i.e., broken bones, ruptured spleen, etc.
- Neurologic/motor - i.e., paresis (hemi or quad)
  - Decerebrate or decorticate posture
  - Ataxia
  - Bradykinesia

4 Other physical symptoms
- Neurologic/sensory
  - Somatosensory loss
  - Visual deficits

5 Speech/Language
- Aphasia
- Dysarthria

6 Cognitive deficits
- Disorientation
- Attention
- Awareness (anosognosia)
- Impaired executive function

7 Executive function
- Self regulatory or control functions that direct and organize all behaviors including readily observable behavior in social context as well as covert cognitive and linguistic behaviors.
- Lezak (1982) “Those mental capacities necessary for formulating goals, planning how to achieve them and carrying out the plans effectively.

8 Importance of executive function
- Critical to self-appraisal - knowing what you can and cannot do and doing something about it.
- Critical to success in many domains: social, academic, vocational, independent living

9 What is Executive Function
awareness of strengths and weaknesses
set realistic goals
plan and organized behavior to reach goals
initiate or inhibit behavior re: goals
self-monitor and evaluate behavior re: progress toward goals
problem solving, cognitive flexibility

Classic presentation: Phineas Gage
- Frontal lobe injury - frontal lobe patient
- prefrontal lobe damage
- “personality change”

Prefrontal (or Frontolimbic) syndromes
- orbital frontal (combined with limbic system)- disinhibition, hyperactivity, euphoria, implusiveness, socially inappropriate, sexual excess, crude humor, fearfulness, lability
- frontal poles - noninitiating, apathetic, inattentive, disinterested, dull, disheveled, unmotivated, slow, unemotional

TBI and Frontal Lobe Symptoms
- prefrontal/frontolimbic injuries--- most common brain injuries
- results in impaired executive functions, reduced control over behavior and emotions, reduced control over cognitive and communicative activity

Fronto/temporal/limbic
- hallmark: memory impairment
- difficulty registering, consolidating, storing and retrieving new information
- may dominant clinical picture

Memory
- Retrospective
  - declarative: factual memory
    • episodic
    • semantic
  - procedural: how to perform previously learned behavioral routines
- pretraumatic amnesia
- postraumatic amnesia
- Prospective

Communication Problems and TBI
- influence of executive system dysfunction, cognitive losses and memory problems on language

Aphasia and TBI
- classic syndromes uncommon
- nonfluent most common
- focal lesions (open head injury)
17 □ Nonaphasic Language/Communication disorders
- “language of confusion”
- “subclinical aphasia
- cognitive language disturbance
- nonaphasic language disorders
- cognitive communicative impairment

18 □ Cognitive Communicative Impairment
- disorganized, tangential, wandering discourse
- word retrieval difficulty, word search behavior
- disinhibited, socially inappropriate, hyperverbosity, pragmatic deficits
- OR

19 □ Cognitive Communicative Impairment
- restricted output, lack of initiation
- reduced information content
- difficulty with macrostructure
- difficulty communicating in distracting environment
- difficulty understanding abstract language