Alzheimer's Disease

And other really bad brain problems

A Disease Organization

Phenomenology
Epidemiology
Pathology
Etiology
Diagnosis
Differential
Comorbid Disorders
Course

Phenomenology
Phenomenology

Dementia

- Disorder of Cognitive Function

Dementia

Other aspects of The MSE

- General Presentation
  - varied with level
  - care taking

Dementia

Other aspects of The MSE

- Emotions
  - Mood
    - Generically euthymic
    - Dysphoria, frustration early on
      - May become agitation or irritable
  - Affect
    - May be appropriate
    - Blunted
    - Inappropriate
Dementia

Other aspects of The MSE

- Thought
  - Process
    - impoverished
  - Content
    - hallucinations rare
    - w/ Sensory impairment
    - delusions
    - poorly formed

Cognition

The Cognitive Functions

- Attention and Concentration
- Language function
- Memory
- Visuospatial Ability
- Perceptual Capacity
- Conceptualization and Abstract Reasoning
- General Intelligence
Judgment and Insight

- Insight
  - Understand situation
- Judgment
  - Make decision using that info

Judgment and Insight

- Competency
- Ability to
  - Understand nature of decisions to be made
  - Risks and benefits
  - Logical Process
  - Consistent

Epidemiology
**Epidemiology**

- 2 - 4 million Americans
- 5-7% of these over 65
- 20% of those over 80
- ¼ of all nursing home beds
- $12,000,000,000

**Pathology**
Tangles and Degeneration

Neuritic Plaques

- Amyloid accumulation
Alzheimer's

Etiology

- Unknown
- Acetylcholine
- Genetics
- Microtubules
- Aluminum
- Blood-Flow Hypothesis

- Glutamate
- Philothermal
- Autoimmune
- Infectious
- Head-Injury
- Other

Diagnosis

Alzheimer's

Diagnosis

- Pathological
- Clinical assessments
- Course
- ~80-90% with standardized criteria
Dementia of the Alzheimer's Type

DSM-IV Diagnostic Criteria

- Memory Impairment, and
- one (or more):
  - aphasia
  - apraxia
  - agnosia
  - executive functioning impairment
  - The Global Criteria

Alzheimer’s

Diagnosis Workup

- Screening tests (Mini-Mental State Exam)
- Neuropsychological Assessment
- Rule out tests

Differential
**Delirium**

Phenomenology

Organic brain syndrome, characterized by
- Acute onset
- Global impairment
- Metabolic derangement

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**Delirium vs. Dementia**

Things in Common

- Cognitive Deficits
- Present with
  - Confusion
  - Memory problems

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**Delirium vs. Dementia**

Things Different

- Delirium: usually reversible
  - Dementia rarely so
- Pathology
  - Dementia: Usually identifiable pathological findings
    - at least on autopsy
  - Delirium: more often physiological
Dementia

Other Differentials

- Benign Senescent Forgetfulness
- Depression
- Pseudodementia??
- Amnesia
- Malingering

Comorbidity

Dementia

Comorbid Disorders

- Delirium
- Depression
- Anxiety
- Psychosis
Course

Alzheimer's

- No Cognitive Disorder
- Very Mild Cognitive Disorder
- Mild
- Moderate
- Moderately Severe
- Severe
- Very Severe

Other Dementias
Specific Pathologies: Degenerative

Pick's Disease

- Frontal atrophy
  - Hypoperfusion
  - Frontal symptoms

Parkinson's Disease

- Subcortical

Huntington's

- Caudate nucleus
  - Hypometabolism
  - Degeneration
  - Aut Dom.
  - Symptoms
- Vascular Dementia

- Infectious Causes

- The *Reversible* Dementias
  - Depression
  - Hypothyroidism
  - Substance induced
  - Normal Pressure Hydrocephalus
  - Nutritional deficiencies