Medical Psychiatry: Cognitive Disorders and Somatoform Disorders

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Introduction
- Delirium: A syndrome, not a disease
- Many underlying causes
- Reversible global impairment of cognitive processes
- Impairment of: consciousness, cognitive function, awareness

Disturbed Functioning
- Cognitive: perceiving, thinking, remembering
- Arousal and attention: involves reticular activating system
- Psychiatric symptoms: mood, perception, and behavior
- Neurologic symptoms: asterixus, nystagmus

Time Course
- Rapid onset – hours to days
- Brief fluctuating course
- Rapid resolution, once underlying causes identified and treated
- Patients with delirium: longer hospital stays, more likely to die

Many Different Names
- Acute brain syndrome
- Acute confusional state
- Metabolic encephalopathy
- Toxic psychosis
- Toxic encephalopathy
- Sundowning
- ICU psychosis

Epidemiology
- Delirium is a common disorder
- General population: 0.4% age 18 and older, 1.1% age 55 and older
- 10-30% hospitalized medically ill
- 30% surgical and cardiac ICU pts.
- 40-50% patients s/p hip surgery
- 90% postcardiotomy patients
- 30-40% hospitalized patients with AIDS
Risk Factors
- Age: 30-40% hospitalized elderly
- Pre-existing brain damage
- History of delirium
- Alcohol, drug dependence
- Diabetes
- Cancer
- Sensory impairment

Other Risk Factors
- Pain
- Malnutrition
- Dehydration
- Poor mobility
- Sleep deprivation
- Male gender
- Young children

Etiology
- Central nervous system illness
- Systemic disease, metabolic disturbance
- Intoxication or withdrawal from substances or medications

CNS Causes
- Epilepsy
- Brain trauma
- Meningitis
- Tumor
- Vascular disease

Systemic Illness
- Endocrine dysfunction
- Liver (hepatic encephalopathy)
- Kidney (uremic encephalopathy)
- Lung disease
- Cardiovascular disease

Drugs, Poisons
- Anticholinergic
- Anticonvulsants
- Antihypertensive
- Antiparkinsonian
- Antipsychotics
- Cardiac glycosides
- Cimetidine
- Clonidine
- Disulfiram
- Insulin
- Phencyclidine
- Phenytoin
- Ranitidine
- Salicylates
- Opiates
- Sedatives
- Steroids
- Heavy metals
- Carbon monoxide
Pathophysiology

- Cholinergic dysfunction: possible common denominator
- Excess dopamine: believed to lead to agitation, psychosis
- Involvement of reticular activating formation leads to problems with attention

DSM-IV-TR Criteria Of Delirium

- Disturbance of consciousness (i.e., reduced clarity of awareness of the environment with reduced ability to focus, sustain or shift attention)

DSM-IV-TR Criteria Of Delirium

- A change in cognition (such as memory deficit, disorientation, language disturbance or the development of a perceptual disturbance that is not better accounted for by a preexisting established or evolving dementia.
- The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day.

5 Types

- Delirium due to a general medical condition
- Substance intoxication delirium
- Substance withdrawal delirium
- Delirium due to multiple etiologies
- Delirium not otherwise specified (unknown cause or due to causes not listed, such as sensory deprivation)

Diagnosis

- Most significant features:
  - Decreased and fluctuating levels of consciousness
  - Disturbance of attention
  - Disorientation
  - Memory disturbance

Other Diagnostic Features

- Disturbed psychomotor behavior
- Disturbance of sleep/wake cycles
- Mood alterations
- Perceptual disturbance
- Disturbed thought processes
- Neurological abnormalities
Diagnostic Procedures

- Mental status exam, including mini-mental status exam
- Longitudinal, systematic clinical assessments
- Physical exam
- Laboratory data

Diagnosis

- The main goal is to determine and treat the underlying medical cause of the delirium.

Laboratory Data

- Blood chemistries: electrolytes, renal and liver fx, glucose
- CBC with diff
- Thyroid function
- RPR
- Urinalysis
- HIV
- EKG
- Chest X-ray
- Drug screen
- EEG: slow waves
- Blood, urine and CSF cultures
- B12 and folate
- CAT scan of brain
- Lumbar puncture

Differential Diagnosis

- Dementia
- Brief psychotic disorder
- Schizophreniform disorder
- Mood disorders
- Anxiety disorders
- Malingering

Course And Prognosis

- Sudden onset
- Resolves over hours to weeks
- After treating underlying causes, usually resolves in 3-7 days
- Most recover
- Others progress to stupor, coma or seizures
- 20-75% die during hospitalization
- 25% die within 6 months
- 35% die within a year

Treatment

- The primary aim of treatment: treat the underlying medical cause of the delirium
- Treat the symptoms of delirium
- Provide a safe and supportive environment
Pharmacologic Treatment
- Minimize polypharmacy in general
- Check medication levels
- Treat psychosis with Haldol (po and IM) or atypical antipsychotics: Risperdol (po,IM,m-tabs) Zyprexa (po, zydis, IM), Geodon (po, IM) or Seroquel
- Avoid benzodiazepines alone, except for alcohol, sedative withdrawal

Behavioral Management
- Ensure safety: fall prevention, remove dangerous items, 1 to 1 sitter, avoid restraints
- Consistent staff, family, friends
- Calm environment: avoid sensory deprivation and over-stimulation
- Regular orientation, explanations, reassurances
- Provide calendars, familiar objects, nightlight, glasses, hearing aid

Dementia
- Global decrease of cognition in multiple domains
- Stable level of consciousness
- Due to abnormalities in brain structure
- Risk increases with age
- Leads to institutionalization
- Often permanent
- 15% of dementias are reversible if treated

Epidemiology
- 8 to 10% over 65 develop dementia
- 40% over age 80 develop dementia
- Dementia of Alzheimer’s type increases in prevalence with age
- Annual cost: 80 to 100 billion $/year
- 50% of nursing home patients have Alzheimer’s
- 2 million people in nursing homes with dementia

Etiology
- Alzheimer’s dz
- Vascular dementia
- Drugs, toxins (including alcohol)
- Tumors
- Infections (Creutzfeld-Jacob, AIDS, neurosyphilis, meningitis)
- Nutritional (B12, folate, thiamine deficiency, pellagra)
- Anoxia
- Normal-pressure hydrocephalus
- Head trauma
- Inflammatory dz (Lupus, MS)
Etiology

- Neurodegenerative Disorders:
  - Parkinson’s disease
  - Huntington’s dz
  - progressive supranuclear palsy
  - Pick’s disease
  - Wilson’s disease

- Metabolic disorders:
  - Leukodystrophies
  - Dialysis dementias
  - Renal insufficiency
  - Hepatic insufficiency
  - Hypon- and hyper-thyroidism
  - Cushing’s syndrome

Diagnosis: DSM-IV-TR

- Dementia of the Alzheimer’s Type
- Vascular dementia (Multi-infarct dementia)
- Dementia due to a general medical condition
- Substance-induced persisting dementia
- Dementia due to multiple etiologies
- Dementia not otherwise specified

DSM-IV-TR Criterion

- The development of multiple cognitive deficits manifested by both:
  - Memory impairment (impaired ability to learn new information or to recall previously learned information)

DSM-IV-TR Criterion

- One (or more) of the following cognitive disturbances:
  - aphasia (language disturbance)
  - apraxia (impaired ability to carry out motor activities despite intact motor function)
  - agnosia (failure to recognize or identify objects despite intact sensory function)
  - disturbance in executive functioning (ie, planning, organizing, sequencing, abstracting)

DSM-IV-TR Criterion

- The cognitive defects in Criteria A1 and A2 each cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning.
- The deficits do not occur exclusively during the course of a delirium.

Diagnosis

- Clinical examination: mental status and physical exam
- Comprehensive history from pt, family
- Memory, problems with behavior and functioning, mood and personality changes
- Mini-mental status exam (Folstein’s)
- Need a baseline score
- Widely used, can compare between different clinicians, and as illness progresses
Laboratory Work-Up
- CBC
- Chemistries: Electrolytes, renal and liver function
- B12, folate
- Urinalysis
- RPR (syphilis)
- HIV
- Chest X-ray
- EKG
- CT or MRI of brain
- SPECT or PET of brain
- Neuropsychologic testing

Psychiatric Symptoms
- Personality changes
- Hallucinations and delusions
- Mood changes: anxiety and depression
- “Pseudodementia”
- Dementia can co-exist with depression
- Dementia is a risk factor for depression

Alzheimer’s Dementia
- Continuing and gradual decline
- Onset: ages 40-90
- Early onset < age 65
- Late onset > age 65
- Early onset linked to chromosome mutations 1, 14, 21
- Systemic and other brain diseases need to be ruled out

Alzheimer’s Dementia
- Definitive diagnosis: brain autopsy
- Senile plaques (amyloid)
- Neurofibrillary tangles
- Apolipoprotein E (APOE) 4 allele: increased risk
- Confirmatory testing: SPECT or PET scan, APOE-4, presenilin

Vascular Dementia
- Associated with arteriosclerosis
- Cannot make diagnosis without clinical evidence (focal neurological signs) or evidence from brain imaging
- Often abrupt deterioration
- Fluctuating, step-wise progression
- Associated with HTN, diabetes, stroke

Lewy Body Disease
- Clinical features similar to Alzheimer’s
- Early onset visual hallucinations and parkinsonism
- Lewy bodies: eosinophilic inclusions in neurons throughout the cortex
- Patients very sensitive to typical antipsychotics
Fronto-Temporal Dementia (Pick’s Disease)

- Insidious onset, gradual progression
- Early decline in social conduct, personality changes, disinhibition
- Brain biopsy: fronto-temporal atrophy and Pick’s bodies in the neurons
- Pick’s bodies contain antibodies to neurofilaments and neurotubules

Pharmocologic Treatment

- Medications used in Alzheimer’s dementia:
  - Acetylcholinesterase inhibitors: tacrine, donepezil, rivastigmine, and galantamine
    - Improve cognition, best in early dementia
  - Memantine, NMDA antagonist, used in severe dementia, can be used in combination
  - Vascular dementia: anticoagulants, ASA to prevent myocardial infarction, stroke

Treatment of Psychiatric Symptoms

- Depression: Selective Serotonin Reuptake Inhibitors
- Psychosis: atypical antipsychotics, haldol only for acute agitation
- Clozaril useful with Parkinson’s disease
- Avoid routine use of benzodiazepines
- Reminiscence, music, exercise therapies
- Self-help groups for family members

Somatoform Disorders

- Physical symptoms which cannot be explained by a medical, another psychiatric or substance abuse disorder
- Patients do not voluntary feign symptoms
- Symptoms cause distress and decreased functioning

Somatoform Disorders

- Somatization disorder
- Hypochondriasis
- Conversion disorder
- Pain disorder
- Body dysmorphic disorder
- Undifferentiated somatoform disorder
- Somatoform disorder not otherwise specified

Somatization Disorder

- Multiple somatic symptoms:
  - 4 pain symptoms
  - 2 GI symptoms
  - 1 sexual symptom
  - 1 pseudoneurologic symptom
- Not voluntarily feigned
- Symptoms not correlated with tests
- Begins < age 30
- Mostly female
- Genetic/cultural/environmental factors
- Rural, low socioeconomic status
- Hysteria, Briquet’s
Hypochondriasis

- Preoccupation with fears of having or the idea that one has a serious illness
- 6 mo/more duration
- distress, decreased functioning
- Chronic or life-long
- 1-5% of population
- Men and women equally affected
- Occurs at any age
- Amplify vague bodily sensations
- Unnecessary tests, doctor shopping
- Distress, decreased functioning
- Chronic or life-long

Conversion Disorder

- One or more symptoms or deficits affecting voluntary motor or sensory fx
- Psychological factors
- Not purposefully feigned
- Diagnostic tests neg.
- History of trauma
- Primary gain, secondary gain
- Rural, lower socio-economic status
- Good remission
- Good prognosis: acute, clear stressor, no co-morbid disease

Pain Disorder

- Pain is major focus and severe
- Causes stress and dysfunction
- Psychological factors
- Does not match physical pathology
- More common in women
- Genetic and environmental factors
- Related to stressors
- Primary, secondary gain

Body Dysmorphic Disorder

- Preoccupation with imagined defect in appearance
- Distress, shame
- Early onset
- Women more affected
- High co-morbidity with depression

Treatment

- Identify the disorder
- Empathize with the patient’s symptoms
- Goal is management not cure
- Avoid unnecessary procedures
- See patient frequently, regular intervals, briefly
- Psychotherapy for hypochondriasis, body dysmorphic disorder, conversion
- SSRIs for BDD