

# Dementia in Patients with Chronic Mental Disorders

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# The Big Picture/Problem

- Symptom Overlap: Delirium/Dementia often involves affective, psychotic, anxiety, or behavioral symptoms in addition to cognitive impairments.
- Variability of Cognitive Impairment in MI: fluctuations due to intensity of symptoms, premorbid IQ, age of onset, persistence of symptoms, comorbid medical/psychiatric disorders, effects of medications.

# The Big Picture/Problems

- Detection of Functional Deterioration in MI: If severe disability from the MI persists, the absence of activities reflecting cognitive functions (work, travel, hobbies, IADLs, etc) prevent detection. This is exacerbated by lack of long term close relationships.
- Who cares? Why is this important?
  - Detection of treatable underlying medical illness
  - Clarify prognosis
  - Apply appropriate adjustment in treatment, placement, and services.

# Mildred

- 57 Y/O WSF brought to ER after being found lying by the road near her trailer in a rural coastal county. No evidence of acute injury, but unable to give coherent history because of profound disorganization and uncooperativeness. Repeatedly requests to be taken home, evasive regarding questions. Speech is “word salad”. Appears to be attending to internal stimuli. Mental health assessment requested.

# Mildred

- While being evaluated in the ER, Mildred has a generalized tonic–clonic (grandmal) seizure followed by a second within 30 minutes. Phenytoin (Dilantin) and lorazepam (Ativan) administered. The remainder of the physical exam and labs are unrevealing except for high blood pressure. Brain imaging shows only mild atrophy. She is hospitalized on psychiatry on a hold with a diagnosis of psychosis NOS, but insists on leaving to take care of Charlie, Al and Flora..

# Mildred

- SW/Sheriff investigate scene, do a house check, discovering hungry cats and farm animals, a prescription bottle, a garden with grape vines and a garage full of wine bottles. Interviews with neighbors and prescribing physician reveal a very eccentric, distrustful, isolated and independent person. She owns the property, and is therefore not eligible for public services. She is transferred to OSH still confused, disorganized, intermittently agitated and demanding to go home. During her prolonged stay no medical reason could be found for her profound persistent impairments in memory, orientation, and other cognitive deficits

# Dementia Diagnosis

- Multiple cognitive deficits due to a medical condition or persistent effects of a substance/toxin
  - Memory impairment--impaired ability to learn new material and/or recall previously learned information
  - Usually a prominent and early symptom
  - Tested through repetition, recall, retention and recognition of a list of words
  - Ask about areas of interest or daily activities—politics, sports, news, entertainment, TV
  - Ask how memory impairment affects function

# Dementia: Diagnosis

- Memory impairment + other cognitive deficits
- Aphasia- language deterioration, empty speech
  - Ask to name objects (anomia), or repeat phrases
- Apraxia-Ask to copy a movement or carry out a movement (Show me how you comb your hair)
- Agnosia-loss of recognition of faces, for example.
- Visual spatial deficits-ask to copy a figure such as intersecting pentagons
- Executive dysfunction

# Executive Dysfunction

- Plan, initiate, sequence, monitor, modify complex behaviors and tasks
- Problem solving
- Abstract thinking
- Judgment
- Insight and self awareness
- Social skills, ability to inhibit inappropriate responses
- Attention and concentration

# Executive Dysfunction

- Most important predictor of functional abilities, IADL abilities and independent living
- Test through:
  - Category fluency (animals, letters)
  - Clock drawing
  - Similarities
  - Trail making test
- Not tested on Minimental State Examination (MMSE)
- Is tested on St Louis University Mental State (SLUMS)  
[http://medschool.slu.edu/agingsuccessfully/pdfsurveys/slumsexam\\_05.pdf](http://medschool.slu.edu/agingsuccessfully/pdfsurveys/slumsexam_05.pdf), and
- Montreal Cognitive Assessment (MOCA), <http://www.mocatest.org/>

# Mood and behavior problems in dementia

- Anxiety, mood, sleep disturbances, agitation, catastrophic reactions, aggression
- Motor abnormalities: gait, falls, speech
- Delusions (paranoia, theft, infidelity, misidentification, replacement), rare hallucinations
- Delirium superimposed.

# Delirium

- Acute confusional state caused by medications/medical conditions
- Often mistaken as or attributed to other mental disorders
- Any brain disease increases vulnerability to delirium and slows recovery
- Acute onset—over hours to days

# Delirium-mental status features

- All cognitive functions, including
  - attention/concentration
  - Short term memory
  - disorientation
- Abnormal level of consciousness
- Psychomotor abnormalities—either slowed down or agitated behavior

# Delirium—other features

- Disorganized thinking/speech
- Misperceptions, illusions, delusions  
hallucinations
- Depressed mood, anxiety
- Emotional lability

# Differential Diagnosis of Dementia

- **Delirium—**
  - comes on over hours to day
  - decreased level of consciousness (sleepy)
  - impairment tends to fluctuate through the day and night
- **Schizophrenia—**
  - Mild cognitive deficits, particularly in attention and executive function
  - Early age of onset, gradual decline over decades
  - Associated with decline in function, IADLs, and self care
  - Rarely attributable to another underlying medical or neurological disorder
- **Depression**
  - Associated with cognitive impairments when mood disorders is severe
  - Poor effort on examination
  - Cognition may improve with depression treatment
  - In elderly, new depression is a risk factor (and may be an early sign of dementia development over several years)
- **Mild cognitive impairment**
  - Early memory problems, probably early dementia
  - Normal aging

# Ralph

- 55 yo WSM with a long history of chronic schizophrenia referred for a “higher level of care” from the group home where he has lived for the past ten years. He has repeated episodes of incontinence to which he is indifferent, refuses to change or launder his clothes/linens, “intrusiveness” (entering others rooms uninvited), and elopements—all new problems that have persisted for the past six months since his return home from a prolonged hospitalization at a local facility for brain aneurysm.

# Ralph

- In the decade before this hospitalization, Ralph was an irritable, intolerant “neat freak” who intermittently refused his medications and appointments, bullied or manipulated fellow residents and would sometimes sneak beers or smoke in his room late at night. Now he is generally more pleasant, cooperative and redirectable even though he has the same delusions and hallucinations. When confronted about his troublesome new behaviors he usually denies that they have occurred or is vague and evasive regarding his purpose or motivations

# Alzheimer's Dementia (AD)

- Diagnosis of exclusion: careful history, physical and neurological examination, clinical and laboratory tests to rule out other etiologies
- Typically begins with deficits in recent memory and executive function accompanied by depression, anxiety, irritability, apathy
- Insidious onset, gradual progression
- Incontinence, gait/motor disturbances, psychomotor and behavioral disturbances common in middle and later stages

# Vascular Dementia

- Due to narrowing of the arteries, or small emboli, that may cause large infarcts (strokes), small infarcts (lacunes), or just microvascular changes (ubiquitous cortical white matter changes on MRI).
- Shared risk factors with Alzheimers disease including elevated blood pressure, diabetes, obesity, abnormal lipids such as elevated cholesterol.
- Unlike AD, associated with known strokes, abnormal neurological examination (e.g. weakness, gait abnormalities)
- Treatment is focused on efforts to prevent more strokes

# Frontotemporal dementia

- Early changes in personality, apathy, disinhibition, poor judgment, poor self care precedes memory problems, which remain comparatively mild
- Younger age of onset (in 50s and 60s)
- Rapid progression over a few years
- 1/3 cases are familial
- Previously called Picks disease
- Seen more frequently in some rare neurological disease such as ALS and progressive supranuclear palsy.

# Dementia associated with Parkinson's disease

- Parkinson's disease is a slowly progressive neurological disease that occurs in mid to late life
- Tremor, slowed movements, rigidity, postural instability
- Dementia common with a slow, insidious onset and progression
- Depression and psychotic symptoms are frequently present
- Dementia starts at least one year after Parkinson's disease
- Must be distinguished from drug-induced parkinsonism

# Dementia with Lewy Bodies

- Visual hallucinations (otherwise rare in AD)
- Fluctuations in cognition (e.g. MMSE score can change wildly from day to day)
- Parkinsonian features—less tremor, but increase in tone, unsteady gait, falls
- Very sensitive to drug-induced parkinsonism from antipsychotics

# Elvis

- 46 yo WDM former motorcycle gang member living with his mother, previous meth and alcohol use, followed for ongoing psychotic symptoms (paranoid delusions, voices), chronic pain/neuropathy/difficulty with ambulation with recurrent falls which dates from an MVA and associated injuries to his back, hip, LE, several years ago. He blames the hospital that he was taken to after the accident, believing they “tried to kill me” because of his gang affiliation....

# Elvis

- Upon evaluation he endorses/exhibits depression, anxiety, paranoia, mood lability, drug seeking, irritability, explosive anger, and somatic problems. He feels rejected by his former gang. His description of an extensive drug dealing network seems grandiose.
- He initially refuses to allow contact or records release from previous providers and hospitalizations. His elderly, kind mother is trying to care for him, but says he does not help much with meals, shopping, cleaning, etc, and seems forgetful, unable to track appointments or take medications reliably. Records reveal moderately severe traumatic brain injury at the time of the MVA.

# Dementia—Multiple other causes

- Other neurological illnesses: Huntington's, Creutzfeld-Jakob, multiple sclerosis, uncontrolled seizures
- Structural brain lesions: Tumor, subdurals, subarachnoid hemorrhage, arteriovenous malformation, aneurysm, hydrocephalus, traumatic brain injury, anoxia, blood loss
- Infections: HIV, neurosyphilis, encephalitis, abscess
- Endocrine: hypothyroidism, hypercalcemia, hypoglycemia
- Nutritional: B12, thiamine, Niacin

# Dementia-Multiple other causes

- Substance abuse: alcohol most common, usually associated with longstanding heavy use, IVDU can damage brain via several mechanisms.
- Medications: Commonly significantly adding to underlying cognitive impairments, but can lead to dementia threshold themselves; benzodiazepines, anticholinergics, opioids, anticonvulsants
- Environmental toxins: heavy metals, organic hydrocarbons (“huffing”)
- Medical illnesses: metabolic disturbances, renal/liver failure, cancer

# Fritz

- 42 yo WSM hospitalized after assaulting his elderly father at home. Paranoid delusions and disorganization with flat affect are apparent, as is ongoing conflict between the two since the son returned from a hospital in California after receiving radiation for an AVM three years ago. Fritz suffered from migraines since late adolescence and developed progressively worsening “panic attacks”, depression, and inability to function during young adulthood.

# Fritz

- Fritz began working in construction after high school, eventually running his own contracting business. The increasing frequency of his panic attacks and headaches (from monthly to daily) resulted in job losses, failed business, and subsequent depression.
- He can tell when he is about to have a panic attack, and they can occur anywhere or anytime, even during sleep. They are always the same, involving vague waves of non-specific fear, nausea, and a sense of unreality, followed by a headache and confusion. His father says Fritz won't speak or follow instructions during these attacks.

# Summary

- Dementia and delirium are common complications in people who suffer from chronic mental illness and are difficult to detect for many reasons.
- Detection can be enhanced by considering and attempting to minimize potential sources of cognitive impairment.
- Educate patients, family and caregivers.
- Encourage engagement in cognitively challenging activities and monitor performance.
- Regular, specific assessments of cognitive function should occur as part of routine care.