

# The Dementias

Overview on the characteristics, diagnosis, treatment, and challenges of common dementias

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# Fred and Ethel - Part 1

Fred and Ethel, 78 and 76 yo respectively, have lived in Ocean Springs, MS, in their home for the past 45 years. Other than Fred's mild hypertension and elevated cholesterol, they have enjoyed relatively good health. They are well connected to their church and friends in the community, have a well-established routine, and have enjoyed their retirement for the past 15 years. Their beautiful waterfront home is completely paid off, they are financially comfortable, and have it set up at the bank so that all their bills are paid automatically. They have 4 children: a daughter that lives in Mobile, a daughter that lives in Dallas, a son that lives in Atlanta, and another daughter that lives in Seattle---all of them work and all of them have very busy lifestyles.

# Fred and Ethel – Part 2

Their lives take a sudden change in late August 2005 when Hurricane Katrina bears down on the Mississippi Gulf Coast. They evacuate to their daughter's house in Dallas. Unfortunately, Ethel becomes very confused when she arrives there, is awake most of the night, agitated and accusatory, insists that they are in Florida, insists that her husband is having an affair, and accuses her daughter of helping him cover it up. The daughter contacts her siblings about her concerns for Mother's mental status but they minimize the event, chalk it up to "stress and fatigue". All parties agree that after 2 weeks of staying in Dallas, that mother's confusion should clear up if she simply goes back to their home to Ocean Springs. Fred and Ethel return to their home on the water, only to find a slab remaining. They then are forced to stay with their other daughter in Mobile. Ethel's confusion worsens further. Now, it appears that at least the daughters in Mobile and the daughter in Dallas are on the same page, agreeing that there is definitely a problem with their mother's cognition. Fred concedes, "Ethel has had a little forgetfulness for a couple of years." The daughter in Mobile works so Fred takes care of Ethel mostly and has been able to keep her pretty calm and grounded. Unfortunately, the stress of trying to negotiate with insurance companies over their lost home combined with frequently missing doses of his medication takes a toll, and Fred tragically suffers a heart attack and dies.

NOW WHAT?

# John

John, a 70 yowm, single, living home alone, is brought to the emergency room by DHR. Apparently, over the past few years, the patient has had progressively odd behaviors. His elderly neighbor informs that when she visits him, he is always dressed in his bathrobe and lately he's been making some inappropriate sexual comments to her. When DHR visited his home, they notice his pantry is bare with the exception of four half empty boxes of cereal. DHR got involved in the patient's case after the judge ordered it due to eight incidents where the patient was trespassing at casinos (entering doors/areas intended only for casino staff). He has no prior criminal history and actually is a decorated veteran.

Upon initial evaluation, the patient appears jovial but at times making disinhibited statements. His affect is grandiose. He is oriented X 3. Short-term memory is impaired. He fails the draw a clock test.

Physical and neurologic examination is unremarkable. Labs are unremarkable. MRI of the brain shows frontal lobe atrophy.

# Dementia Defined

- “She has Alzheimer’s but doesn’t have dementia.”
- “She didn’t have Alzheimer’s until she had the strokes.”
- Dementia: cognitive impairment that is progressive and causes problems in functioning. Memory is a problem BUT also have deficits in language, orientation, tasks of day to day living, attention, calculations, etc.

# The Dementias

- Definition:

- A reduction in cognition despite a stable level of consciousness
- A chronic, usually irreversible, usually progressive impairment affecting 2 or more cognitive areas: memory, aphasia/language, motor/apraxia, executive functioning

## Types:

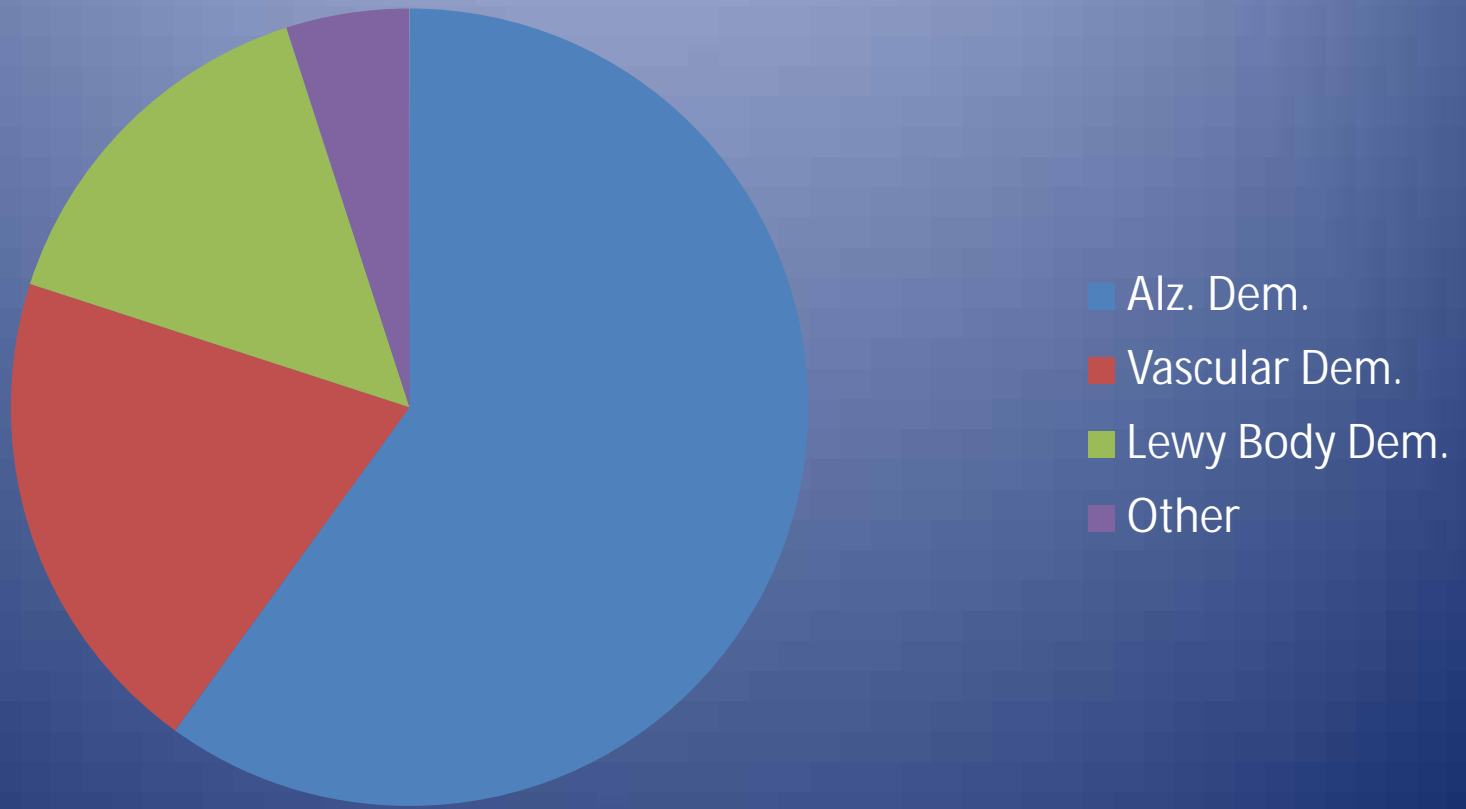
- Dementia of the Alzheimer's Type (DAT)
- Vascular dementia
- Lewy Body Dementia
- Frontotemporal dementia
- Mixed dementia (e.g., DAT plus Vascular Dementia or Lewy body dementia plus vascular dementia)
- Others (normal pressure hydrocephalus, AIDS dementia, alcohol induced, traumatic brain injury)

- Prevalence:

- 1-2% of the population 65 yo
- 30% of population by 85 yo

# Dementia Types (Diagnoses)

Types



# Dementia of the Alzheimer's Type (DAT)

- Roughly 65%
- Slow, progressive, fatal
- Cause: genetic but multifactorial
- Stages: mild, moderate, or severe OR stages 1 through 7
- Diagnosis: history, neuropsychological testing, neuroimaging, labs
- Cerebral cortex is affected --- all realms of cognition are affected (especially memory)
- Treatment:
  - Cognitive enhancers (Aricept and Namenda)
  - Behaviors (psychotropic medications)
  - Structure/consistency
  - Family/caregiver education and support groups
  - Precautions/safety



# Vascular Dementia

- Roughly 20 to 25%
- Onset may be sudden from a stroke; may be a stepwise progression from multiple strokes (multi-infarct dementia); may be very slowly progressive like Alzheimer's due to chronic hypertension and microvascular disease (Binswanger's disease)
- Cause: cerebrovascular injury (stroke, lead, chronic hypertension, sudden hypotension, and anoxic brain injury\*)
- Diagnosis: history, neuropsychological testing, neurologic examination, neuroimaging, lab, EKG, carotid flow studies, etc)
- Cognitive deficits will be spotty as parts of the brain affected varies.
- Treatment:
  - Address underlying medical problems (atrial fibrillation, hypertension, high cholesterol, diabetes mellitus, anti-coagulation)
  - Behaviors (psychotropic medications)
  - Structure/consistency --- family/caregiver education and support groups --- precautions/safety

# Lewy Body Dementia

- Roughly 15 to 20%
- Much like DAT, slow, progressive, fatal
- Traits:
  - Cognitive impairment but with visual hallucinations early in the illness
  - Frequent falls
  - Parkinsonism (rolling tremor, shuffling gait)
  - Very sensitive to medications (easily get delirious and antipsychotics make them worse, not better)
  - Look delirious with no obvious cause for a delirium (will wax and wane in their level of consciousness, have times that they are pretty lucid and oriented, but a few hours later, may be very confused and hallucinating)
  - Cognitively, executive functioning is disproportionately severely impaired. Memory is impaired but they may be able to recall objects when prompted.

# Lewy Body Dementia

- Diagnosis: history, neuropsychological testing, neuroimaging, laboratory, response to antipsychotics??
- Treatment:
  - Minimize medications, avoid antipsychotics, trial and error. Almost always, less is better.
  - Structure/consistency --- family/caregiver education and support groups --- precautions/safety

# Frontotemporal Dementia

- 10 to 20% of all dementias
- Common cause of early onset dementia (commonly presents age 50-60 yo)
- More prevalent in males
- Pick's Disease is an older term; now, multiple variants of the disease have been identified
- Traits:
  - Prominent changes in personality and behavior that include disinhibition, antisocial actions, lack of insight, loss of personal awareness, hyperorality or changes in eating habits (eat only one thing like cold cereal)
  - Have significant problems with abstract thinking, attention shifting, executive functioning
  - Neuroimaging early in the illness is normal; as the illness progresses, there is significant atrophy of the frontal lobes or anterior temporal lobes

# Mixed Dementia

- A combination of two or more dementias (e.g. Alzheimer's dementia plus vascular dementia or Lewy body dementia plus vascular dementia, etc.)
- This may constitute the majority of the patients we refer to as demented
- For instance, there is rarely a case of Alzheimer's disease that doesn't have at least some component of Vascular Dementia as well

# Dementia Diagnosis Reality

- Quite often, the diagnosis is uncertain, despite the confidence in the voice of the diagnostician
- Quite often, the cause of the dementia is due to more than one factor - MIXED. For example, you can have both Vascular AND Alzheimer's...or Vascular AND Alcohol induced dementia....and others as well
- A prize does not come to your mailbox if you have one diagnosis versus another.

# Is Diagnosis Important?

- **Sometimes.** There are some treatable causes of cognitive impairment that should be ruled out with a good workup. There are certain diagnoses that require a great deal of caution in what medications are prescribed. Genetic testing is really unnecessary. Quite often, many of the specialized scans and other things done are not going to change treatment or outcome. I am yet to cure a case of dementia with an MRI scan. The fact is, I am yet to cure a case of dementia.

# Dementia Types from a Practical Standpoint

- **Level of dysfunction**

- **Mild:** Mild cognitive problems, needs some oversight and supervision but not 24 hour. Still able to do a lot for themselves. Self-realization of deficits is more prominent and can cause depression. Behaviors pretty normal. Consider POA.
- **Moderate:** More pronounced problems in multiple areas of functioning (not just forgetful). Needs great deal more supervision, probably 24 hour. Needs others to give meds. Should not drive. Consider conservatorship/guardianship if no POA yet.
- **Severe:** Profound cognitive problems, illogical speech, odd behaviors, incontinence. Must have 24 hour supervision, perhaps a locked unit to prevent wandering.



# Dementia Types from a Practical Standpoint

- Behaviors: depression, anxiety, hallucinations, delusions, aggression, wandering, inappropriate behaviors.
  - Why are the behaviors happening?
    - Pain?
    - Out of the routine? Environmental changes? Other life events?
    - Delirium
      - Infection? (UTI, pneumonia)
      - New medications or medication interaction?
      - Other medical problems? (Arrhythmia, COPD, low sodium, etc.)

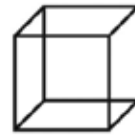
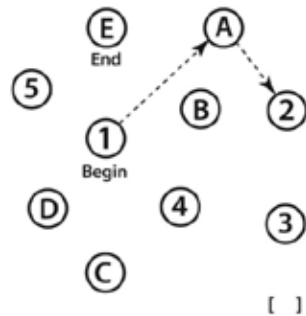
# Dementia Diagnosis

- **History** should tell the diagnosis over ANY test. There is no substitute for spending the time to get the chronology of events. That means you **must** talk to more than just the patient. Collateral history is critical.
- MSE: neuropsychological testing is ideal but usually not available. MoCA can be the poor man's neuropsych ([www.mocatest.org](http://www.mocatest.org))
- Labs and scans: can assist in diagnosis; also rule in/out delirium and truly treatable sources of AMS.

**MONTREAL COGNITIVE ASSESSMENT (MOCA)**  
Version 7.1 Original Version

NAME: \_\_\_\_\_  
Education: \_\_\_\_\_ Sex: \_\_\_\_\_  
Date of birth: \_\_\_\_\_  
DATE: \_\_\_\_\_

**VISUOSPATIAL / EXECUTIVE**



Copy  
cube

Draw CLOCK (Ten past eleven)  
(3 points)

POINTS

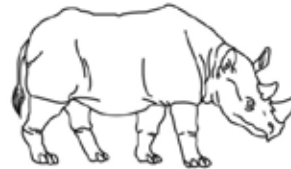
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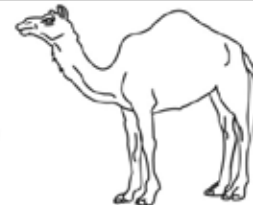
**NAMING**



[ ]



[ ]



[ ]

\_\_\_/3

**MEMORY**

Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.

FACE VELVET CHURCH DAISY RED

1st trial

2nd trial

No points

**ATTENTION**

Read list of digits (1 digit/ sec.).

Subject has to repeat them in the forward order

[ ] 2 1 8 5 4

Subject has to repeat them in the backward order

[ ] 7 4 2

\_\_\_/2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors

[ ] FBACMNAAJKLBFAFAKDEAAAJJAMOF AAB

\_\_\_/1

Serial 7 subtraction starting at 100

[ ] 93

[ ] 86

[ ] 79

[ ] 72

[ ] 65

4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt

\_\_\_/3

**LANGUAGE**

Repeat: I only know that John is the one to help today. [ ]

The cat always hid under the couch when dogs were in the room. [ ]

\_\_\_/2

Fluency / Name maximum number of words in one minute that begin with the letter F

[ ] \_\_\_\_\_ (N ≥ 11 words)

\_\_\_/1

**ABSTRACTION**

Similarity between e.g. banana - orange = fruit

[ ] train - bicycle

[ ] watch - ruler

\_\_\_/2

**DELAYED RECALL**

Has to recall words

WITH NO CUE

FACE

VELVET

CHURCH

DAISY

RED

Points for  
UNCUED  
recall only

[ ]

[ ]

[ ]

[ ]

[ ]

[ ]

\_\_\_/5

**Optional**

Category cue

Multiple choice cue

**ORIENTATION**

[ ] Date

[ ] Month

[ ] Year

[ ] Day

[ ] Place

[ ] City

\_\_\_/6

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www.mocatest.org

Normal ≥ 26 / 30

TOTAL

\_\_\_/30

Administered by: \_\_\_\_\_

Add 1 point if ≤ 12 yr edu

# How do the Medical Professionals Treat Dementias

- Cognitive Enhancers: Aricept, Razadyne, Exelon, Namenda
  - Minimal to questionable efficacy
  - Is it changing the course of the illness? Are their major behavioral improvements because of these cognitive enhancers?
  - What do you think?
    - Exelon patch 9.5 mg/day 30 patches = \$277.99/mo
    - Aricept 10 mg 30 pills = \$302.74/mo
    - Namenda 10 mg 60 pills = \$240.84/mo
    - Namenda/Aricept combo = \$543.58/mo OR \$6,522.96/yr

# How does the Psychiatric Practitioner Treat Dementias?

- Treating the behavior and other psychiatric problems is the goal
- Other psychotropic medications:
  - **Antidepressants:** *usually* harmless, often beneficial, most are cheap
  - **Antipsychotics:** Not indicated by FDA---but in many forms of dementia, they are the only thing that reduces agitation in a tormented patient; occ worsen confusion in some populations; has warnings that should be discussed with caregiver **before** administration (“Black Box” CV, orthostasis, falls)
  - **Anxiety medications:** Ativan, Xanax, Klonopin; rarely a good long term solution. Usually worsens confusion
  - **Sleeping pills:** beware

# Role of Antipsychotics in Treatment of Agitation in Dementia

- Will it help? Is the benefit worth the risk?
  - Are they tormented? Are they aggressive to others? At risk of hurting self? Are they going to have to go to a higher level of care or be kicked out of a facility unless behavior is curbed? Is family on board and practical (e.g. ,quality of life for the patient is *their* priority and not just yours)?
  - Past med trials – Ask caregivers (family, NH staff, doctors, HH nurse)
  - Vitals OK? Falls? Signs of Parkinsonism?
  - Dosing and administration
    - Time of day (e.g., 2pm and QHS)
    - Hold for sedation and low BP (e.g. SBP<100)
    - Start low, titrate for effect. May need to decrease once delirium is resolving/resolved.
    - Choose an agent that is typically given in multiple doses per day (Risperdal, Seroquel, Zyprexa )--- not once a day meds

# How does the Psychiatric Practitioner Treat Dementias?

- Educate the family/caregiver
- Observe the family/caregiver. Are they at their breaking point? Are they becoming more tormented and ill than the caregivee?
- Ensure safety and adequate level of care

# Dementia: How does the Caregiver Treat it?

- Environmental interventions
  - Keep to a routine. Make every day exactly like the previous. Don't take Mother to Christmas...take Christmas to mother!
  - Delusions (fixed false beliefs): Don't rock the boat, do not confront or correct...DISTRACT
  - Allow them to settle into what ever new environment they are encountering
  - Do not do things for you (to relieve your guilt); do not do things they want you to do; do the things they **need** you to do. (Emphasis on visitation and trips away from the routine)
  - Pay attention to their health, medication changes, cognitive changes (especially acute mental status changes)



# Conclusions

- Dementia is the second most devastating diagnosis in psychiatry. Its cost emotionally and financially to caregivers is tremendous.
- In 2012, 15.4 million caregivers provided more than 17.5 billion hours of unpaid care valued at \$216 billion– [alz.org](http://alz.org)
- In 2013, Alzheimer's will cost the nation \$203 billion. This number is expected to rise to \$1.2 trillion by 2050– [alz.org](http://alz.org)
- 1 in 3 seniors dies with dementia

# Conclusions

- The treatments for these illnesses are greatly palliative. Unfortunately, this may be the way it is for the foreseeable future. That is, a “cure” does not appear to lie around the corner.
- Despite this bleak outlook, our role as health care providers serving this population has never been more critical. As the fields of cardiology and oncology have advanced, the demand for our services have grown larger. With an aging population of baby boomers, demand will grow greater. The resources to handle this growth in demand are likely to stretch thin. This necessity will hopefully inspire innovation.
- We cannot measure our success in the CURE of the disease we attempt to treat. Rather, we should measure success in the reduction of torment in the hearts and minds of our patients and their families. We are attempting to help people fall with grace and dignity. This accomplishment cannot be measured in statistics, but we feel it in our own hearts when we succeed.



