THE MANY FACES OF DEMENTIA
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Statistics
- In 2012 The Alzheimer's Society reported 36 million people with dementia worldwide.
- 4.5 million people in the US with dementia.
- Estimated 646 million new cases in the next 40 years.
- One person in eight has AD if over 65 years.
- Underweight persons ages 40-60 have 64% higher risk of dementia.

Demographics
- Half of elders over 85 have some form of dementia.
- Likelihood of developing dementia doubles every five years after age 65.
- Depression increases risk of dementia.
- 25% of people with dementia live in nursing homes, the remaining 75% live either in private residence or residential care facilities.
DEMENTIA IS NOT A SPECIFIC DISEASE

Memory loss is a common symptom however not all memory loss is dementia. People with dementia have serious problems with two or more brain functions, such as memory and language

• Unable to think well enough to do normal activities
• Loss of ability to solve problems or control emotions
• Personality changes
• Agitation or hallucinations

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<th>Early Signs of Dementia</th>
<th>Normal Aging</th>
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<td>Forgetting the names of people close to them</td>
<td>Forgetting the names of people they rarely see</td>
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<td>Forgetting things more often than they used to</td>
<td>Briefly forgetting part of an experience</td>
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<td>Repeating phrases or stories in the same conversation</td>
<td>Not putting things away properly</td>
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<td>Unpredictable mood changes</td>
<td>Mood changes in response to an appropriate cause</td>
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<td>Decreased interest in activities &amp; difficulty making choices</td>
<td>Changes in their interests</td>
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FACTORS THAT INCREASE DEMENTIA RISK

- Blood Pressure
- Blood Sugar
- Belly Size
- Inflammation
- Cortisol
- Stress
- Genetics
- Sedentary Lifestyle
TYPES, CHARACTERISTICS & PATHOPHYSIOLOGY

ALZHEIMER’S DEMENTIA

- Most common type of dementia – 50-60%
- Brain changes: deposits of protein fragments called plaques and twisted stands of protein called tangles.
- Alzheimer’s Society 2011 recommendations call it a three stage disease beginning before onset of symptoms
- Characteristics include apathy, depression, short term memory impairment, aphasia, agnosia (recognition of objects), apraxia (motor activity) and difficulty with executive functions of abstract thinking, making sound judgments, and planning tasks.
- Progresses through distinct stages, prolonged disease trajectory, 12 years from onset of symptoms
- Patients do not regain lost functions
VASCULAR DEMENTIA

AKA—multi-inferct, subcortical vascular dementia, cerebral autosomal dominant arteriopathy with subcortical infarcts (CADASIL) and leukencephalopathy

• 20-30% of all dementias—second most common type
• Brain changes: microscopic bleeding and blood vessel blockage, clinical stroke or subclinical vascular brain injury
• Stair step decline trajectory
• Common to be concurrent with Alzheimer’s—“mixed dementia”
• Characteristics include impaired judgment and inability to plan steps to execute a task, usually present first as opposed to memory loss. Location of brain injury determines how thinking and physical functioning are affected. Uncontrolled laughing and crying, declining ability to pay attention; impaired function in social situations; and difficulty finding the right words.
LEWY BODY DEMENTIA

10-15% of all dementias

- Brain Changes: Abnormal clumps or aggregations of protein alpha synuclein which causes degeneration of nerves that produce dopamine
  - When found in the cortex, dementia is the result
  - When found in the substantia nigra, Parkinson's disease is the result
- Characteristics include cognitive fluctuations in attention and alertness, visual hallucinations, spontaneous features of Parkinsonism, REM sleep disturbances, severe sensitivity to side effects of neuroleptic drugs, frequent falls, autonomic dysfunction, apathy, and cogwheeling in extremities
- Early appearance of behavior changes as opposed to AD
- Waning and waxing decline trajectory
PARKINSON’S DEMENTIA

- 50-80% of patients with Parkinson’s disease will develop dementia which is essentially indistinguishable from Lewy Body Dementia (LBD).
- Changes in brain cells in the cortex from clumps of alpha synuclein protein similar to LBD.
- Characteristics similar to LBD with a decline in thought processes and reasoning in a person who has been diagnosed with Parkinson’s disease for at least a year. Sleep disturbances, delusions with paranoia, changes in memory, concentration and judgment, visual hallucinations, anxiety, irritability, cogwheeling in extremities.
- Disease trajectory much like LBD.

FRONTOTEMPORAL DEMENTIA

- AKA – Pick’s Disease, Primary Progressive Aphasia (PPA), Progressive Supranuclear Palsy (PSP), Behavioral variant (bvFTD), corticobasal syndrome.
- Accounts for about 10% of dementia cases.
- Unknown cause, no distinguishing microscopic cause in all cases.
- Generally people with FTD are younger, around 60.
- Characteristics include lack of insight, difficulty assessing social expectations, impulsive behaviors, swearing, compulsive or repetitive behavior, may have body stiffness similar to Parkinson’s.
- Loss of language skills is greater than memory loss.
- Gradual and progressive decline trajectory, but steeper than AD.

MIXED DEMENTIA

- More than one type of dementia occurring simultaneously.
- 40% of dementia population likely has some vascular compromise.
- 15% of all dementia.
- Survival can vary widely depending on such factors as the cause of the dementia, age at diagnosis and coexisting health conditions.
RARE CONDITIONS

- Creutzfeldt-Jakob Disease
- Huntington's Disease
- Wernicke-Korsakoff syndrome
- Normal pressure hydrocephalus
- Binswanger’s (subcortical vascular dementia)
- Down’s syndrome-early onset Alzheimer’s
- Multiple Sclerosis
- HIV
- Subdural Hematoma
- Cancer and treatment

KEY QUESTIONS FOR DETERMINING DEMENTIA TYPE

- What were the first symptoms (evidence of confusion, memory loss, personality change)? When?
- Was decline gradual or stepwise (change, then stable for a time, then change again)?
- Is there a history stroke or TIA’s? (If yes, then did it start after the stroke or TIA’s)
- History of atrial fibrillation? Longstanding high blood pressure? Significant alcohol intake?
- Does the patient have or did he/she have stiffness, rigidity, or shuffling gait when able to walk?

WHEN SOMETHING HAS CHANGED...

- Dementia-chronic, progressive fatal disease
- Delirium-sudden change in ability to think clearly
- Depression-mood changes more prominent than other changes in thinking, behavior

Brain Damaging Events
- Chronic traumatic encephalopathy
- Anoxic
- Hypoperfusion
- Hypoglycemia
- Alcohol or drug abuse
**EVALUATION TOOLS**

- Palliative Performance Scale (PPS)
- Mini Mental Status Exam (MMSE)
  - [http://www.mountsinai.on.ca/psych.on-call-resources/on-call-resources/mmse.pdf](http://www.mountsinai.on.ca/psych.on-call-resources/on-call-resources/mmse.pdf)
- St. Louis University Mental Status (SLUMS)
  - [http://medschool.slu.edu/agingsuccessfully/pdfsurveys/slumsexam_05.pdf](http://medschool.slu.edu/agingsuccessfully/pdfsurveys/slumsexam_05.pdf)
- Activities of Daily Living Scale (ADLs)
- Functional Assessment Staging Test (FAST)

**CHIMBOP~A DELIRIUM ASSESSMENT TOOL**

- C - Constipation
- H - Hypovolemia, hypoglycemia
- I - Infection
- M - Medications
- B - Catheter and bladder outlet obstruction
- O - Oxygen deficiency
- P - Pain

(created by staff at Legacy Hopewell House Hospice Center)

**MEDICATION MANAGEMENT**
CHOOSING WISELY BY AMERICAN GERIATRICS SOCIETY

1. Don’t recommend percutaneous feeding tubes in patients with advanced dementia-instead offer oral assisted feeding
2. Don’t use antipsychotics as the first choice for behavioral and psychological symptoms of dementia
3. Avoid using medications other than metformin to achieve hemoglobin A1c <7.5% in most older adults; moderate control is generally better
4. Don’t use cholinesterase inhibitors for dementia without periodic assessment for perceived cognitive benefits and adverse gastrointestinal effects
5. Don’t recommend screening for breast, colorectal, prostate or lung cancer without considering life expectancy and the risks of testing, over diagnosis and over treatment
6. Don’t use physical restraints to manage behavioral symptoms of hospitalized older adults with delirium
7. Don’t use prescription appetite stimulants or high-calorie supplements for treatment of anorexia or cachexia in older adults; instead optimize social supports, discontinue medications that may interfere with eating, provide appealing food and feeding assistance, and clarify patient goals and expectations

COGNITIVE ENHANCERS

Cholinesterase Inhibitors:
- Donepezil (Aricept), Rivastigmine (Exelon), Galantamine (Razadyne)
  - Donepezil: 5mg daily for 4 weeks, then increase to 10mg daily
  - Rivastigmine: 1.5mg BID with titration every two weeks up to 6mg BID; patch 4.6mg/d, increase to 9.5mg after 4 weeks
  - Galantamine: 24-32mg daily (GI side effects problematic)

NMDA Receptor Antagonist:
- Memantine (Namenda): 5mg daily, increase by 5mg/day weekly. Max dose 20mg/day in divided doses
  - Moderate efficacy compared to placebo in moderate to severe AD as mono therapy and when combined with Donepezil
  - Dosing if CrCl <30mL/min max dose is 5mg BID

COGNITIVE ENHANCERS, CONT.

- Efficacy for cognition noted for patients with mild to mod AD; however does not affect the underlying course of disease
- Only 10-20% show modest global improvement
- Not effective for patients with advanced dementia
- Potential for significant weight loss for 1 out of 20 patients

- Trial medication for effectiveness for three months—if no improvement then discontinue
PHARMACOLOGIC TREATMENT OF BEHAVIORAL & PSYCHOLOGICAL SYMPTOMS OF DEMENTIA (BPSD)

- Evaluate, eliminate medications and consider:
  - Stopping cutting — PTSD? CHIMBOP? Psych condition? Depression?
  - Always consider pain as the underlying cause of physical behaviors

- For sundowning and bedtime sedation:
  - Mirtazapine 15-45mg/d, Trazodone 50-100 mg/d, Quetiapine 12.5-100 mg/d

- For agitation with aggressive behavior:
  - Risperidone 0.25-3 mg/d in divided doses or
  - Valproic Acid or Divalproex Sodium 750-1000mg/d with clonazepam 1mg q 6 hrs scheduled
  - Haloperidol can be added prn
  - Avoid benzodiazepines which may cause paradoxical worsening of symptoms

- When all else fails:
  - Chlorpromazine 50-100mg q 6 hrs or Phenergan 10-40mg q 8 hrs scheduled

   Exception to the rule: Quetiapine is the drug of choice with Lewy Body Dementia as other antipsychotics may cause increase of symptoms

WANDERING BEHAVIORS

- Medications often worsen wandering
  - Secondary to Akathisia (motor restlessness)
- Aggressively treat sleep problems
  - Increase sleep hygiene
- Aggressive or disruptive behavior

  - Take frequent walks

- Secure area for patient to wander
  - Outside door barriers
  - Rig alarm (hang tin cans from door by a string)
  - Door Locks patient can't operate
  - Fire hazard risk
  - Visual barriers
  - Stop sign on door
  - Hide door knob with cloth

- Safe-Return ID bracelet ($40)
  - Available through Alzheimer's Association

- Limit robbery risk
  - Patient should not wear expensive jewelry
  - Patient should not carry a large sum of money

- Notify local police of wandering risk

ADVANCED DEMENTIA AND HOSPICE

Medicare Disease Specific Guidelines for Hospice

Must have all of the following:
- PAS score 7C or below
- Total functional dependence
- Less than five words a day
- Oud malnutrition
- Inability to ambulate
- Profound memory deficits

At least one of the following medical complications in the last twelve months:
- Aspiration pneumonia
- Pyelonephritis or other urinary tract infection
- Septicemia
- Multiple decaction drain +/- stage 3
- Recurrent fevers after antibiotics
- Inability to maintain oral feed and caloric intake with 10% weight loss in previous six months or serum albumin <2.5 g/dL
BENEFITS TO HOSPICE

1. Manage symptoms
2. Support patient and family
3. And optimize quality of life!

THANK YOU ALL FOR ATTENDING!