How to Help Someone with Memory Loss

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Outline

- Types of dementia
  - Alzheimer’s Disease
  - Vascular Dementia
  - Parkinsonian Dementia

- The Inova Memory Center
Why the Memory Center

- Standardized evaluation and management according to American Academy of Neurology guidelines
  - Consensus on other aspects of care
  - Knowledge and understanding of new developments in the field
- Create a database that can be used for clinical research
Cognitive Domains

- Registration
- Recall (memory)
- Visuospatial
- Language
- Attention
- Executive Functioning
The ability to encode information for future use

The information can come into the brain through any of the five senses

The part of the brain that encodes the memory is not the same as the part of the brain that stores it
Recall (Memory)

- Verbal Recall
  - Immediate (attention)
    - Tested with repetition
  - Short-term (working memory)
    - Phone number
  - Long-term
    - Recall at five minutes
Visuospatial

- The ability to use knowledge of where things are in space
- Must have visual recall but then also be able to apply it to a situation
  - Walking, driving
- In dementia manifests as getting lost while driving or walking in neighborhood
Language

- Receptive function
  - Understanding what is heard, read or seen
- Expressive function
  - Being able to communicate by speaking, writing, or acting
Language

- Naming
  - Proper names: grandchildren, object names, generic names
  - Word substitution
- Repetition
- Simple and complex commands
- Category fluency
Attention

- Sustained effort to accomplish a task
- Ability to manipulate information in your head
  - One step beyond rote memory and automatic responses
  - Something you have to think about
- Ability to pick things out of a list or put something in reverse order
Executive Function

- Planning
- Things that involve more than one step
  - How to prepare a meal
  - How to balance a checkbook
- Not just automatic activities
Dementia versus Normal Aging

- Dementia must be:
  - A decline from premorbid functioning beyond that expected for age and education matched controls
  - Significantly impact lifestyle and function, e.g. ADL’s
Dementia versus Normal Aging

- Normal aging involves:
  - Psychomotor slowing: decrease in speed of mental processing
  - Slower retrieval of information
  - Lower rate of learning
  - Improved vocabulary
  - “Crystallized intelligence”: more practical and effective strategies in real world tasks
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Type of dementia is defined by the cognitive domain that it affects first and worst:

- Memory
- Language
- Attention and executive function
- Visuospatial
- Behavior
Classification of Dementias

- Symptoms depend on the part of the brain that is damaged
  - e.g. Alzheimer’s Disease is temporal lobes, giving mostly memory problems
- Pathology of the damage does NOT determine the symptoms, but some pathologies are more associated with certain diseases
The Major Dementias

- Alzheimer’s Disease: 60% overall (80% of late onset dementias)
- Vascular Dementia: 20%
- Parkinson’s related dementias: 10%
  - Parkinson’s Disease Dementia
  - Lewy Body Dementia
- Frontotemporal Dementia: < 5%
Mild Cognitive Impairment

- Cognitive decline beyond what is expected for age but without meeting criteria for dementia
- Different types, depending on cognitive domain
- Most are amnestic
- Doesn’t interfere with lifestyle
Alzheimer’s Disease: Symptoms

- Memory:
  - Semantic memory: Word meanings, categories, classes
    - Naming is impaired early
  - Episodic memory: Events, conversations, appointments
Alzheimer’s Disease: Symptoms

- Executive Function:
  - Trouble organizing tasks
  - Doesn’t finish tasks
- Attention relatively preserved until later in disease
Alzheimer’s Disease: Symptoms

- **Visuospatial:**
  - Trouble with spatial orientation
  - Gets lost in familiar surroundings

- **Neuropsychiatric:**
  - Depression
  - Apathy
  - Delusions
  - Visual hallucinations
  - Agitation
Alzheimer’s Disease: Pathology

- Nerve cells in brain cannot signal to each other properly
- Plaques
- Tangles
- Cell loss (atrophy)
Alzheimer’s Disease Pathology: Plaques

- Interrupted communication between nerve cells
- Made of Beta Amyloid
  - Protein that forms clumps between cells, disrupting synaptic transmission
Alzheimer’s Disease: Treatment

- Pharmacological:
  - Cholinesterase Inhibitors:
    - Exelon (Rivastigmine)
    - Aricept (Donepezil)
    - Razadyne (Galantamine)
  - NMDA (glutamate) antagonist
    - Namenda (Memantine)
Alzheimer’s Disease: Treatment

- Nutraceuticals
  - Omega 3 fatty acids (DHA) 1000 mg daily
  - NSAIDS – ASA 81 mg qd
  - Vitamin E – probably not helpful
  - Ginko Biloba – definitely not helpful
  - Vitamin B complex
Alzheimer’s Disease: Treatment

- Lifestyle:
  - Cognitive training
    - Effect of education level
  - Physical activity
  - Social activity and interactions
Vascular Dementia

- Dementia caused by stroke
- Can affect any cognitive domain
- Does not have to involve memory
- Slow thinking
Vascular Dementia

- Usually distinct or abrupt onset
- May be cumulative effect of multiple small strokes
  - “small vessel disease” (microvascular)
  - Subcortical white matter ischemic disease
Vascular Dementia Treatment

- Cholinesterase inhibitors (Aricept, Razadyne, Exelon)
  - Treatment effect about as good as with Alzheimer’s disease
- Antihypertensive treatment, especially with ACE inhibitors
  - May reduce incidence by 6–7%
Parkinsonian Dementias

- About 5–10% of PD patients will have dementia at some point
- Risk of dementia about 3x greater in PD than general population
- Depression is common in PD with or without dementia
- PD is more than just a motor disease
Parkinsonian Dementias

- Parkinson’s Disease Dementia:
  - Develops more than one year after onset of motor symptoms of PD (usually many years later)
- Dementia with Lewy Bodies (DLB)
  - Develops before onset of motor symptoms or within one year
  - Can happen before Parkinson’s Disease Motor symptoms are evident
Symptoms and signs:
- Slow, progressive course in the setting of well established PD of more than a year’s duration
- Can involve deficits of attention, memory, language, and executive function
- Behavioral symptoms can include depression, hallucinations and delusions
Lewy Body Dementia
Core Features

- Fluctuation of cognition and alertness
  - Sometimes near normal
  - Other times confused, sleepy, forgetful
  - Periods may last hours to days

- Visual hallucinations
  - Usually well formed: people, animals, insects
  - Often realize they are not real
Lewy Body Dementia
Other features

- Delusions, often paranoid
- Depression is common
- Executive dysfunction
  - Trouble with planning and executing tasks
- Memory impairment: may develop later
Lewy Body Dementia Treatment

- May have significant response to dementia medicines: Aricept, Razadyne, Exelon
- Atypical antipsychotics for behavior problems (Seroquel)
The Inova Memory Center
Who is it?

- Inova and non Inova employed physicians, psychiatrists, neurologists, researchers, neuropsychologists, social workers and nurses.
Goals of the Inova Memory Center

- Facilitate cooperation among the broad range of clinicians and health professionals involved in the care of dementia patients
- Centralize services into one entity and streamline sharing of clinical information
- Assure high level of care
Inova Memory Center: Current Structure

- Patient makes an appointment to see a clinician based on geographic and specialty needs
- Patient is evaluated and referred for appropriate testing or other needed ancillary services
- Can be given opportunity to participate in a research study
Is this the right place to call?

- My mom has been having some problems for a while but it seems worse now.
- I can’t leave the house when I did for an hour and then got my hair cut without planning it things were really bad when I returned. Now I don’t dare leave.
- I think I am losing my memory, I am having trouble remembering things
What happens

- Nurse Lead takes call and does screening of what patient needs are
  - Do you have a diagnoses?
  - Are you worried the diagnoses is wrong?
  - Do you need help in the home?
  - Do you have support for yourself?
  - Do you know where to find information that is factual?
  - Do you want to see a physician?
  - Do you need help with issues at home from a social worker?
  - Elder Link/ Alzheimer's Association/