Medical Considerations in the Care of Persons with Dementia

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Outline

• Aging and Dementia in Vermont
• Provide an overview of Dementia and its Effects on Cognitive Function
  • Diagnosing Dementia and differentiating it from MCI and Delirium
  • Cases – practical applications
• Questions and Discussion
“Grow old along with me! The best is yet to be.”

Robert Browning (1812-1889)
Life Expectancy Changes

- 1900-1902: 49 years
- 1939-1941: 64 years
- 1969-1971: 71 years
- 2003: 77.4 years
- 2015: 78.7 years

Source: CDC
Aging: International and Domestic Scope

• Baby Boom Generation
  • Born between 1946 and 1964
  • Quickly approaching age of retirement
In 2000, Vermont ranked 26th among states in the percent of population ≥ 65. Where do you think we will rank in 2030?

- 8th
- 18th
- 28th
- 38th
- 48th
**Ranking of States by projected population age 65 and over: 2000, 2010, and 2030**

[http://ic.galegroup.com/ic/ovic/ReferenceDetailsPage/DocumentToolsPortletWindow?displayGroupName=Reference&jsid=3908e482c48b82ed8b875295de5460&action=2&catId=&documentId=GALE%7CEJ3011870101&url=tel_s_tsla&zid=a86206f71e49125e7d8d0f34a9b666d](http://ic.galegroup.com/ic/ovic/ReferenceDetailsPage/DocumentToolsPortletWindow?displayGroupName=Reference&jsid=3908e482c48b82ed8b875295de5460&action=2&catId=&documentId=GALE%7CEJ3011870101&url=tel_s_tsla&zid=a86206f71e49125e7d8d0f34a9b666d) last accessed 1/24/2016

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*Note: The rankings are based on the projected population age 65 and over for the years 2000, 2010, and 2030.*
What do the numbers look like for Alzheimer’s in Vermont?

• 42% increase in number of persons with AD in 10 years
  • 12,000 people in 2016 and 17,000 people in 2025
• 5th leading cause of death in Vermont
• 4th highest Alzheimer’s death rate in America

• 30,000 caregivers providing 34 million hours of unpaid care
• Value of unpaid care = $417,000,000
• Higher health care costs of caregivers = $21,000,000
Why Care about Aging?

• Cost and Aging
  • Generally held as cohort ages (Boult 2001, Evans 2001):
    • Chronic disease accumulates
    • Disability rises
    • Costs increase
  • According to CDC, US health care spending will increase 25% by 2030
    • Raises concern that disability and aging may threaten future solvency of federal health insurance
Our Future?

Officials in Washington continue to ignore warnings about this storm, which is projected to be a category 500 billion....

Federal Deficit
Conflicting Predictions

• According to National LTC survey:
  • Disability rates are decreasing (Manton 2007)
  • Costs to maintain patients in non-disabled state are decreasing (Manton 2007)

• Aging is not cause of increased costs
  • Care near death and *not* for all elderly patients is most expensive (Seshamni 2004)

• Number of complex causes for increased costs
  • “The aging of the population is not an adequate explanation” of health care cost increases (Bodenheimer 2005)
Close Call?

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Beyond Cost to Quality

• IOM report *Crossing the Quality Chasm* (2001):
  • Identified provision of high quality medical care to general population as major challenge

• Vulnerable elderly:
  • Are often dependent on others for assistance with ADL's
  • Cannot participate in their own health care plan
  • Receive suboptimal care across a variety of settings (Jencks 2000, Wenger 2003)

• IOM report *Retooling for an Aging America* (2008):
  • US health care system is unprepared to provide for the social and health care needs of our elderly
“The measure of a society is found in how they treat their weakest and most helpless citizens.”

-James Earl Carter
Dementia, Delirium, and MCI: Three Entities Easily Confused

• All 3 conditions:
  • Marked by cognitive impairment
  • May be revealed when patients present for care in the ER or the hospital environment
  • Affect older adults

• However, each demand different (though sometimes overlapping) management strategies
Case of Mrs. Smith

- 87 yo woman who presents to your clinic for complaint of memory problems with her daughter. **Key question: Is it safe for her to be at home?**
- Mrs. Smith has noticed problems with remembering names over the last year.
- Still very independent and taking care of all of her iADLs/ADLs at home
- **PMHx:**
  - Htn
  - Hypothyroidism
- **SH:** Retired high school teacher. Graduated from college. Widowed 3 years ago. Lives by herself in her own home. Daughter lives 30 minutes away.
Case of Mrs. Smith

- **Meds:** HCTZ, ASA 81 mg daily, MVI
- **FH:** Father died of MI at age 65; mother died of CVA at 80. Mother may have had memory problems.
- **ROS:** No falls, no automobile crashes, no bounced checks, no change in mood, no weight loss, no social withdrawal; no delusions or hallucinations.

- **PE:** VS WNL
  - Reg S1 S2, I/VI SEM
  - CTA b/l
  - No edema, no digital cyanosis
  - CN II-XII intact, strength on confrontational testing 5/5 in upper and lower extremities; FTN intact bilaterally; no ratcheting or cogwheeling; stable gait.
  - MMSE: 27/30. Lost two points for recall and one point for orientation to place.
  - PHQ-9: 2.
What condition do we assign to Mrs. Smith?

• A) Mild cognitive impairment (MCI)
• B) Alzheimer’s Dementia (AD)
• C) Depression
• D) Delirium
• E) Cognitive Impairment, No Dementia (CIND)
• F) Normal age related memory changes
Mild Cognitive Impairment

• Can be thought as a point on the continuum between normal cognition and dementia

Normal Cognition ------ MCI ------- Dementia

• Affects between 14-18% of older adults (>70 years)
• Associated with increased risk of development of dementia (3-5X greater rate of conversion than people without MCI; 12-20% per year)
• Can reverse itself (particularly if due to medications or untreated mood disorders)
Mild Cognitive Impairment

• Different types of MCI exist:
  • Amnestic MCI vs. Non-amnestic MCI

• Diagnostic Criteria:
  • Amnestic MCI:
    • Report by patient/family of memory problems
    • Objective evidence of memory problems
    • Preserved general cognitive function
    • Intact ADLs
    • No dementia
  • Non-Amnestic MCI:
    • Preserved memory
    • Deficit in other cognitive domains (executive, language, visual spatial)
    • Intact ADLs
    • Not demented
Making the Diagnosis

• Interview patient and informant (for corroborating information)
• Medication Review
• Physical Exam
• MMSE
• PHQ-9 (to screen for depression)
• Lab testing to exclude reversible contributors
• Imaging (non-contrasted head CT vs. MRI)
Practical Management: Discussing the Diagnosis, Next steps, and Treatment

• Family conference

• Discuss treatment:
  • Little evidence for role of routine use of drugs in treatment
  • Little downside to suggesting control of vascular risk factors (blood pressure control, diabetes control, lipid control)
  • Little evidence to suggest benefit from cognitive training programs, though likely not harmful to pursue strategy of reading and keeping socially engaged
  • Continued follow-up with our clinic (q6 months-1 year)
  • Keep family members engaged
Key Points

• MCI:
  • Is common among older adults
  • Exists on continuum between normal cognition and dementia
  • Is potentially reversible
  • Can develop further into dementia
  • Focus treatment on control of risk factors for worsening of cognition
Case of Mrs. Jones

• 81 yo woman who presents to your clinic for complaint of memory problems with her daughter.
• Mrs. Smith had lived by herself until recent hospitalization for hip fracture.
• During that hospitalization, she developed behavioral problems at night that “required” use of risperidone.
• Eventually she was discharged to her daughter’s home.
• She continues to receive the risperidone (0.5 mg bid) as suggested at her discharge 3 months ago.
• Key Question: How much supervision does she need at home?
• PMHx:
  • Dementia --- diagnosed during her hospitalization
  • Hypothyroidism
Case of Mrs. Jones

- **Meds**: Lisinopril, risperidone 0.5 mg bid, simvastatin 20 mg qhs
- **FH**: Father died of MI at age 65; mother died of CVA at 80. Mother may have had memory problems.
- **ROS**: No falls but feels unsteady on her feet, no longer driving; dependent on her daughter for help with dressing, feeding, bathing.

- **PE**: VS WNL
  - Reg S1S2, I/VI SEM
  - CTA b/l
  - 1+ lower extremity edema, no digital cyanosis
  - CN II-XII intact, strength on confrontational testing 5/5 in upper and lower extremities; FTN intact bilaterally; no ratcheting or cogwheeling; stable gait.
  - MMSE: 21/30. Lost three points for recall and three points for orientation to place and three points for orientation to time.
  - PHQ-9: 10. (She notes she is very distressed by her “muddled thinking”)
What condition do we assign to Mrs. Jones?

- A) Mild cognitive impairment (MCI)
- B) Alzheimer’s Dementia (AD)
- C) Depression
- D) Delirium
- E) Normal age related memory changes
Dementia

• Exists at far end of our continuum of cognition

Normal Cognition -------MCI-------Dementia

• Affects approximately 5 million older adults in US currently and projected to affect 13.8 million people by 2050

• In average panel of 2,000 primary care patients, 24 individuals will have dementia --- only 8 patients will be recognized
Dementia

• Heterogeneous condition:
  • Alzheimer’s: memory, language, visual-spatial problems
  • Frontotemporal dementia: loss of executive function, personality changes
  • Lewy Body Dementia: hallucinations, parkinsonism, fluctuating mental status
  • Vascular Dementia: Step-wise deterioration, abrupt onset

• Current Diagnostic Criteria (DSM-V):
  • Impairment in one of five cognitive domains (*old definition= memory + one other domain)
  • Decline in function
  • Must interfere with everyday activities
  • Do not occur exclusively during delirium
  • Are not better accounted for by other mental disorder (e.g., major depression) ---- or by an untreated medical condition or use of a medication
Making the Diagnosis

• Interview patient and informant (for corroborating information)
• Medication Review
• Physical Exam
• MMSE
• PHQ-9 (to screen for depression)
• Lab testing to exclude reversible contributors
• Imaging (non-contrasted head CT vs. MRI)
Practical Management: Discussing the Diagnosis, Next steps, and Treatment

- Family conference
- Discuss mitigating factors:
  - Use of sedating medication which could be affecting her cognition
  - Possible episode of delirium during hospitalization --- which could put her at risk for development of persistent cognitive problems
  - Role of depressive symptoms in blunting her cognition
- Treatment:
  - Plan to titrate risperidone off
  - Re-evaluate patient in 2 months with plan to retest cognition and mood
  - At that point, if mood disturbance continues, consider treatment of depression with anti-depressant
Dementia Treatment

• Control vascular risk factors
• Avoid anticholinergic medications (benzodiazepines, diphenhydramine)
• Promote socialization
• Support and validate caregivers
• Address safety concerns (driving, cooking, wandering)
• Connect families up with resources (legal and financial planning)
• Establish goals of care
• Discuss use of acetylcholinesterase inhibitors (e.g. donepezil) or NMDA antagonist (e.g. memantine)
Key Points

• Dementia:
  • Very common in older adults, but frequently goes undiagnosed
  • Exists at far end of spectrum after MCI
  • Can be associated with memory deficits, but does not have to
  • Represents a change for the patient from baseline and causes functional decline
  • Treatment should include non-pharmacologic strategies (in addition to possible pharmacologic strategies)
Case of Mr. Washington

- Consulted request by another hospital service for “acute dementia”
- **Key Question:** Family wonders will he be able to go home?
- 75 yo man, retired newspaper writer who fell 3 days ago and broke his hip
- Successful surgery, but night after surgery, patient became agitated, pulled his own Foley catheter, tried to leave unit, and had to be restrained
- Family is distressed
- Patient is distressed
- Inpatient treating team is distressed
Case of Mr. Washington

• Pleasant older man, laying in his room with lights off and television on
• Confused, not able to meaningfully answer your questions
• PMHx:
  • Hx of Tobacco abuse
  • CAD
  • COPD
• Meds: Heparin SQ, diphenhydramine (premed for blood transfusion), albuterol nebs, metoprolol, ASA, simvastatin, oxycodone/acetaminophen 5 mg q6h
Case of Mr. Washington

• PE: VS unremarkable
  • Confused, A and O x 0.
  • Hard of hearing, dry MM
  • Regular S1S2
  • CTA b/l (but grabs at your stethoscope and mumbles throughout your exam)
  • +BS, NT, slightly firm
  • Unable to cooperate with neurologic exam
  • MMSE: unable to complete
  • CAM: Positive
What condition do we assign to Mr. Washington?

• A) Mild cognitive impairment (MCI)
• B) Alzheimer’s Dementia (AD)
• C) Depression
• D) Delirium
• E) Normal age related memory changes
Delirium

• Common complication of the care of older adults with illness
• Affects approximately 10% of older adults in the emergency department --- recognized in only 16%-35% of cases
• Occurs in 11%-42% of hospitalizations of older adults --- large numbers go unrecognized
• Associated with increased risk of death, extended hospital LOS, and worse physical/cognitive recovery
• Exists in 3 forms: hypoactive, hyperactive, and mixed
Making the Diagnosis

• Suspect it --- there is no one diagnostic test!

• Key Features:
  • 1. Acute onset and fluctuating course
  • 2. Inattention
  • 3. Disorganized thinking
  • 4. Altered level of consciousness

*Delirium is present with Features 1 or 2 plus either 3 or 4

• Commonly Used Tools to Evaluate:
  • CAM
  • CAM-ICU
Making the Diagnosis

• Acute onset or fluctuating course --- talk with family or nursing staff

• Inattention: Ask patient to say days of the week backwards or squeeze your fingers every time you say the letter “A” in the phrase SAVEAHEART

• Disorganized Thinking:
  • Will a stone float on water?
  • Are there fish in the sea?
  • Does 1 lbs weigh more than 2 lbs?
  • Can you use a hammer to pound a nail?
Treatment

• Best treatment is prevention

• Prevention strategies include:
  • Orienting individuals to environment (calendars in room, shades open during daytime, lights off at night)
  • Maintaining nutrition and hydration
  • Avoiding restraints and lines (when possible)
  • Manage pain
  • Provide adaptive equipment for hearing and vision

• Recognize delirium early
Treatment

• Identify and treat precipitants (infection, electrolyte disturbances, offending drugs, pain, etc)
• Minimize time in bed
• Minimize restraints
• Follow prevention strategies
• Very limited evidence to support use of antipsychotic medications
Key Points

• Delirium:
  • Frequently complicates care of older, hospitalized adults but also frequently missed
  • Associated with worse health outcomes for patients
  • Detection requires thinking about it or screening for it
  • CAM is the most popular delirium detection tool
  • Management strategies exist
Summary

• Dementia, Mild Cognitive Impairment, and Delirium are three common conditions that affect the older adult
• Each have profound consequences for older adults (and their families)
• Resources and strategies exist to help manage these conditions
• Our outpatient teams at UVM Medical Center are willing to see patients to help with assessment of cognition (847-1111)
Questions/Comments

• Thank you!
• Email: michael.lamantia@uvmhealth.org