Dementia and Confusion in Older Women

OB GYN Grand Rounds 9/15/12

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Alzheimer’s disease: 60-80 %
  • Includes mixed AD + VD

Lewy Body Dementia: 10-25 %
  - Parkinson spectrum

Vascular Dementia: 6-10 %
  - Stroke related

Frontotemporal Dementia: 2-5 %
  - Personality or language disturbance
DSM – 5   Dementia = Neurocognitive disorders

• Major Cognitive Impairment
  - Substantial cognitive decline from previous level of performance based on history
  - Formal testing (>2 SD from norm)

• Minor Cognitive Impairment
  - Modest decline from previous
  - Formal testing (1-2 SD from norm)
Alzheimer’s Disease

• Chronic progressive decline in 2 or more areas of cognition:
  – Memory*
  – Executive function
  – Ability to recognize objects - *agnosia
  – Motor ability - *apraxia
  – Language – *aphasia

• Severe enough to interfere with occupational or social life
Alzheimer’s disease

- Deficits are not due to DELRIUM
- Deficits are not due to another mental disorder
Alzheimer’s: A Public Health Crisis

• **Scope of the problem**
  - **5.3M** Americans with AD in 2015
  - Growing epidemic expected to impact **13.8M** Americans by 2050 and consume **1.1 trillion** in healthcare spending
  - Almost 2/3 are women (longer life expectancy)
  - If disease could be detected earlier incidence would be much higher
    - Pre-clinical stage 1-2 decades

• **Some populations at higher risk**
  - Older African Americans (2x as whites)
  - Older Hispanics (1.5x as whites)
Base Rates

• 1 in 9 people 65+ (11%)
• 1 in 3 people 85+ (32%)

Alzheimer’s Association Facts and Figures 2014
Challenges & Opportunities

• AD under-recognized by providers
  - Only 50% of patients receive formal diagnosis
    • Millions unaware they have dementia
  - Diagnosis often delayed on average by 6+ years after symptom onset

Boise et al., 2004; Boustani et al., 2003; Boustani et al., 2005; Silverstein & Maslow, 2006
Introduction to ACT on Alzheimer’s
What is ACT on Alzheimer’s?

60+ ORGANIZATIONS

500+ INDIVIDUALS

statewide

collaborative

volunteer driven

IMPACTS OF ALZHEIMER’S

BUDGETARY

SOCIAL

PERSONAL

$$$
Collaborative Goals/Common Agenda – www.actonalz.org

Five shared goals with a Health Equity perspective
ACT Tool Kit

• Evidence and consensus-based, best practice standards for Alzheimer’s care

• Tools and resources for:
  – Primary care providers
  – Care coordinators
  – Community agencies
  – Patients and families
After a Diagnosis
This resource has action steps, tips, and resources for persons diagnosed with Alzheimer’s and their caregivers and is a helpful resource to share and discuss after a diagnosis is made.
**User:** Health care and community-based providers serving persons with the disease and caregivers

Dementia Trainings for Direct Care Staff
This comprehensive list of dementia training resources provides options for organizations seeking best practices in preparing their direct care staff.
**User:** Dementia care settings

Care Coordination and Community-Based Provider Practice Tool
This tool helps ensure that a care plan is guided by the goals, needs and preferences of the person with Alzheimer’s, thereby fostering support for the person and care partners.
**User:** Health care settings and community-based provider settings

Dementia Curriculum
A 10-module dementia curriculum – including disease description and diagnosis, demographics, cognitive assessment, and societal impact – that can be used alone or with other education offerings.
**User:** Educators, practicing professionals, and health care students
Evaluation of memory concerns
Case Study: Colleen

• 66 y/o retired accountant for family business
• Presents to primary care with memory complaints
• Daughter agrees that short-term memory is poor
• Began 2 years ago, seems to be worsening
• Frequent medication changes, managing independently
• Lives with husband who is still running the family business
Signs and Symptoms of AD – should prompt an evaluation/”screen”

- Memory loss
- Confusion
- Disorientation to time or place
- Getting lost in familiar locations
- Impairment in speech/language
- Trouble with time/sequence relationships
- Diminished insight

Alzheimer’s Association, 2009
Signs and Symptoms of AD – should prompt an evaluation/"screen

• Poor judgment/problem solving
• Changes in sleep and appetite
• Mood/personality/behavior changes
• Wandering
• Deterioration of self care, hygiene
• Difficulty performing familiar tasks, functional decline
Practice Tips

• Clinical interview
  - Let patient answer questions without help
  - Remember: Social skills remain intact until late stage dementia
    • Easy to be fooled by a sense of humor, reliance on old memories, or quiet/affable demeanor
Practice Tips

• Red flags
  - Repetition (not normal in 7-10 min conversation)
  - Tangential, circumstantial responses
  - Losing track of conversation
  - Frequently deferring answers to family member
  - Over reliance on old information/memories
  - Inattentive to appearance
  - Unexplained weight loss or “failure to thrive”
Practice Tips

• Family observations:
  - ANY instances of getting lost while driving, trouble following a recipe, asking same questions repeatedly, mistakes paying bills
  - Take these concerns seriously: by the time family report problems, symptoms have typically been present for quite a while and are getting worse
Cognitive “Screening” / Assessment
Screening Measures

• Wide range of options
  – Mini-Cog™ (MC)
  – Mini-Mental State Exam© (MMSE)
  – St. Louis University Mental Status Exam™ (SLUMS)
  – Montreal Cognitive Assessment™ (MoCA)
• All but MMSE free, in public domain, and online

Borson et al., 2000; Folstein et al., 1975; Nasreddine 2005; Tariq et al., 2006
Mini-Cog™

Contents

• Verbal Recall (3 points)
• Clock Draw (2 points)

Advantages

• Quick (2-3 min)
• Easy
• High yield (executive fx, memory, visuospatial)

Subject asked to recall 3 words
Leader, Season, Table +3

Subject asked to draw clock,
set hands to 10 past 11 +2

Borson et al., 2000
MINI-COG™

1) GET THE PATIENT’S ATTENTION, THEN SAY: “I am going to say three words that I want you to remember now and later. The words are Banana Sunrise Chair. Please say them for me now.” (Give the patient 3 tries to repeat the words. If unable after 3 tries, go to next item.) (Fold this page back at the TWO dotted lines BELOW to make a blank space and cover the memory words. Hand the patient a pencil/pen).

2) SAY ALL THE FOLLOWING PHRASES IN THE ORDER INDICATED. “Please draw a clock in the space below. Start by drawing a large circle.” (When this is done, say) “Put all the numbers in the circle.” (When done, say) “Now set the hands to show 11:10 (10 past 11).” If subject has not finished clock drawing in 3 minutes, discontinue and ask for recall items.

3) SAY: “What were the three words I asked you to remember?”

Score the clock (see other side for instructions): Normal clock 2 points Abnormal clock 0 points

(Score 1 point for each) 3-Item Recall Score

Clock Score

Total Score = 3-item recall plus clock score

0, 1, 2, or 3 = clinically important cognitive impairment likely;

4 or 5 = clinically important cognitive impairment unlikely
Mini-Cog

Pass
• ≥ 4

Fail
• 3 or less

Borson et al., 2000
Mini-Cog Research

- Performance unaffected by education or language
  - Borson Int J Geriatr Psychiatry 2000
- Sensitivity and specificity similar to MMSE (76% vs. 79%; 89% vs. 88%)
  - Borson JAGS 2003
- Does not disrupt workflow & increases rate of diagnosis in primary care
  - Borson JGIM 2007
- Failure associated with inability to fill pillbox
  - Anderson et al Am Soc Consult Pharmacists 2008
Mini-Cog: Colleen

http://youtu.be/DeCFtuD41WY
Colleen’s Clock
Colleen’s Score

Introductory Script:

- We are going to take a quick look at your memory. Some people think this task is easy and others find it more challenging. Just do the best you can.

- I am going to give you 3 words to try and remember. Listen carefully and repeat these words back to me when I’m finished: Leader, Season, Table
  (Repeat words if necessary to make sure patient has registered each one. Do not warn them that you will ask for the words again later).

- (Fold paper in half so circle is facing patient). Now, I want you to make a clock for me by putting in all the numbers where they are supposed to go. Then, set the time for 10 past 11. (Repeat instructions as needed – this is not a memory test. If patient cannot complete the clock in 3 minutes, move on to next step).

- Now, what were those 3 words I asked you to remember earlier?

Mini-Cog Scoring:

Word recall 2 / 3
Clock draw 0 / 2
Total 2 / 5

Screen FAIL: 0 – 3
Screen PASS: 4 – 5

Word recall: 1 point for each word spontaneously recalled without cueing.

Clock draw: 0 or 2 points. To obtain credit, all numbers must be in correct sequence and position (e.g., 12, 3, 6, and 9 in anchor positions) with no missing or duplicate numbers. Two hands point toward 11 and 2 (length of hands does not matter).
Dementia Work-up and Diagnosis
Dementia Work-Up

**PROVIDER CHECKLIST**

**Dementia Work-Up**

**History and Physical**
- Review onset, course, and nature of memory and cognitive deficits (Alzheimer’s Association Family Questionnaire may assist) and any associated behavioral, medical or psychosocial issues
- Assess ADLs and IADLs, including driving and possible medication and financial mismanagement
- Conduct structured mental status exam (e.g., MoCA, SLUMS, MMSE)
- Assess mental health (consider depression, anxiety, chemical dependency)
- Perform neurological exam focusing on focal/ lateralizing signs, vision, including visual fields, and extraocular movements, hearing, speech, gait, coordination, and evidence of involuntary or impaired movements

**Diagnostics**

**Lab Tests**
- Routine: CBC, lytes, BUN, Cr, Ca, LFTs, glucose
- Dementia screening labs: TSH, B12
- Contingent labs (per patient history): RPR or MHA-TP, HIV, heavy metals

**Neuroimaging**
- CT or MRI when clinically indicated

**Neuropsychological Testing**
- Indicated in cases of early or mild symptom presentation, for differential diagnosis, determination of nature and severity of cognitive functioning, and/or development of appropriate treatment plan
- Typically maximally beneficial in the following score ranges: MoCA 19-27; SLUMS 18-27; MMSE 18-28
Diagnosis*

Mild Cognitive Impairment
- Mild deficit in one cognitive function: memory, executive, visuospatial, language, attention
- Intact ADLs and IADLs; does not meet criteria for dementia

Alzheimer’s Disease
- Most common type of dementia (60–80% of cases)
- Memory loss, confusion, disorientation, dysnomia, impaired judgment/behavior, apathy/depression

Dementia With Lewy Bodies/Parkinson’s Dementia
- Second most common type of dementia (up to 30% of cases)
- Hallmark symptoms include visual hallucinations, REM sleep disorder, parkinsonism, and significant fluctuations in cognition

Frontotemporal Dementia
- Third most common type of dementia primarily affecting individuals in their 50s and 60s
- EITHER marked changes in behavior/personality OR language variant (difficulty with speech production or loss of word meaning)

Vascular Dementia
- Relatively rare in pure form (6-10% of cases)
- Symptoms often overlap with those of AD; frequently there is relative sparing of recognition memory

* The latest DSM-5 manual uses the term “Major Neurocognitive Disorder” for dementia and “Mild Neurocognitive Disorder” for mild cognitive impairment. This ACT on Alzheimer’s resource uses the more familiar terminology, as the new terms have yet to be universally adopted.

Follow Up Visit

- Include family members, friends, or other care partners
- Review intervention checklist for Alzheimer’s disease and related dementias

- Refer to Alzheimer’s Association Minnesota-North Dakota 24/7 Helpline at 1-800-272-3900 and/or the Senior LinkAge Line® at 1-800-333-2433
Dementia Work-Up

- H&P
- Diagnostics
  - Labs
  - Imaging?
- **Objective** cognitive measurement
  - More specific testing (e.g., neuropsychometric)
MoCA

MONTREAL COGNITIVE ASSESSMENT (MOCA)

VISUOSPATIAL / EXECUTIVE

- Copy cube: 3 points
- Draw CLOCK: Ten past eleven

NAME:  
Education:  
Sex:  
Date of birth:  
DATE:  
POINTS

CONTOUR  [ ]
NUMBERS  [ ]
HANDS  [ ]

NAME:  
Education:  
Sex:  
Date of birth:  
DATE:  
POINTS

NAME:  
Education:  
Sex:  
Date of birth:  
DATE:  
POINTS

NAME:  
Education:  
Sex:  
Date of birth:  
DATE:  
POINTS

NAMING

CONTOUR  [ ]
NUMBERS  [ ]
HANDS  [ ]

NAME:  
Education:  
Sex:  
Date of birth:  
DATE:  
POINTS

NAME:  
Education:  
Sex:  
Date of birth:  
DATE:  
POINTS

NAME:  
Education:  
Sex:  
Date of birth:  
DATE:  
POINTS
MoCA

Pass
•  ≥ 26

Fail
• 25 or less
VAMC SLUMS Examination

Questions about this assessment tool? E-mail aging@slu.edu.

Name_________________________________________ Age __________________________

Is patient alert?_________________________________ Level of education ___________

1. What day of the week is it?
2. What is the year?
3. What state are we in?
4. Please remember these five objects. I will ask you what they are later.
   Apple    Pen    Tie    House    Car
5. You have $100 and you go to the store and buy a dozen apples for $3 and a tricycle for $20.
   0  How much did you spend?
   1  How much do you have left?
6. Please name as many animals as you can in one minute.
   0  0-4 animals  1  5-9 animals  2  10-14 animals  3  15+ animals
7. What were the five objects I asked you to remember? 1 point for each one correct.
8. I am going to give you a series of numbers and I would like you to give them to me backwards.
   For example, if I say 42, you would say 24.
   0  87  1  649  1  8537
9. This is a clock face. Please put in the hour markers and the time at
   ten minutes to eleven o'clock.
   0  Hour markers okay
   1  Time correct
   2  Please draw a line on the clock face to show the time.

Tariq et al., 2006
<table>
<thead>
<tr>
<th></th>
<th>High School Diploma</th>
<th>Less than 12 yrs education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pass</strong></td>
<td>≥ 27</td>
<td>≥ 25</td>
</tr>
<tr>
<td><strong>Fail</strong></td>
<td>26 or less</td>
<td>24 or less</td>
</tr>
</tbody>
</table>

Tool Selection

Montreal Cognitive Assessment (MoCA)
- Sensitivity: 98% for dementia
- Specificity: 87%

St. Louis University Mental Status (SLUMS)
- Sensitivity: 98% for dementia
- Specificity: 81%

Mini-Mental Status Exam (MMSE)
- Sensitivity: 78% for dementia
- Specificity: 88%

Larner 2012; Nasreddine et al, 2005; Tariq et al., 2006; Ismail et al., 2010
CPT- Cognitive performance test

• Fairview Occupational Therapist
  – Identify level of functional impairment associated with cognitive deficit

• Formal neuropsychiatric testing
Delivering the Diagnosis

• GIVE the diagnosis

• Connect patient/family to community resources
  – Examples: Senior linkage line, Alzheimer’s Association

• Discuss follow-up
  – regular intervals (e.g., q 6 months) for proactive care

• Provide written summary of visit
Delivering the Diagnosis

• Address immediate problems:
  - Management of medications, finances, meals
  - Home safety
  - Caregiver burnout
  - Need care supporter to track and come to appointments
Delivering the Diagnosis: Sam

https://www.youtube.com/watch?v=vy2ZC5ZSZL8
Dementia Care and Treatment
INTERVENTION CHECKLIST
For Alzheimer’s Disease and Related Dementias

Diagnostic Uncertainty & Behavior Management
Refer to Specialist as Needed
- Neurologist (dementia focus, if possible)
- Geriatric Psychiatrist
- Geriatrician
- Memory Disorders Clinic

Counseling, Education, Support & Planning
Link to Community Resources
- Contact the Alzheimer’s Association Minnesota-North Dakota 24/7 Helpline at 1-800-272-3900 or the Senior LinkAge Line® at 1-800-333-2433
- Provide After a Diagnosis¹
- Provide Taking Action Workbook⁷

Stimulation / Activity / Maximizing Function
Daily Mental, Physical and Social Activity
- Provide Living Well Workbook⁶
- Adult day services
- Sensory aids (hearing aids, pocket talker, glasses, etc.)
Safety

Note: Individuals with dementia are vulnerable adults and may be at a higher risk for elder abuse.

Driving
- Counsel on risks
- Refer for driving evaluation
- Provide At the Crossroads

Medication Management
- Family oversight or health care professional

Financial / Legal
- Encourage patient to assign durable power of attorney; elder law attorney as needed

Advance Care Planning

Complete Advance Care Plan
- Refer to advance care planning facilitator within system, if available
- Encourage completion of healthcare directive forms

Medications

- Memory: Donepezil, rivastigmine patch, galantamine and memantine (mid-late stage)
- Mood & Behavior: SSRIs or SNRIs
- Avoid/Minimize: Anticholinergics, hypnotics, narcotics, and antipsychotics (not to be used in Lewy Body dementia)
Treatment: Medications

• Cholinesterase inhibitors
  - Donepezil, Rivastigmine, Galantamine, Cognex
  - Possible side effects: nausea, vomiting, syncope, dizziness, anorexia

• NMDA receptor antagonist
  - Memantine
  - Possible side effects: tiredness, body aches, dizziness, constipation, headache
Care and Treatment

• The care for patients with Alzheimer’s has very little to do with pharmacology and more to do with **psychosocial interventions**

• Connect patient and family to experts in the community
  - Alzheimer’s Association, care coordinator
  - Stress this is part of their treatment plan and you expect to hear about their progress at next visit
Confusion in older adults - beyond dementia

Dementia
• Chronic, progressive decline in cognitive function

Delirium
• Acute onset of confusion with lack of attention
What is delirium? DSM 5

- Impaired attention
- Acute disturbance of consciousness
- Fluctuating course
- Disorganized thinking
- Perceptual disturbances
- Psychomotor motor changes
- Sleep disturbance

- Evidence that there is an underlying physiologic or medical condition causing the disorder
Subtypes of delirium

- Hyperactive 30%
- Hypoactive 50%
- Mixed 20%

Hyperactive
Hypoactive
Mixed
Who is at risk for delirium?

• Anyone with underlying physiologic or medical instability

= Those stressed and with limited reserve*

*This is the frail geriatric population
Causes of Delirium usually multiple causes!

• “Anything” that can acutely disrupt normal brain function
  - Medications
  - Brain trauma
  - Blood chemistry abnormalities
  - Infection
  - Pain
  - Myocardial ischemia
Fig. 1. A basic pathoetiologic model of delirium.
Medications – common contributor to delirium

ANY change in drug therapy
- New
- Discontinued
- Dose change
- Time change
Medications

• Most common offenders:

**ANTICHOLINERGIC**

medications

Benadryl
Urinary incontinence drugs
Antidepressants
Antipsychotics
Identifying delirium tool

**CAM** – Confusion Assessment Method

- 1. Acute onset and fluctuating course
- 2. Inattention
- 3. Disorganized thinking
- 4. Altered level of consciousness

- Probable delirium requires (1 **and** 2) + (3 or 4)
Delirium

• Evidence that there is an underlying physiologic or medical condition causing the disorder
Causes of Delirium

• Mnemonic
  
  **D**rugs
  **E**lectrolyte disturbances
  **L**ack of drugs
  **I**nfection
  **R**educed sensory input
  **I**ntracranial
  **U**rinary, fecal
  **M**yocardial, pulmonary
Summary

• Confusion in older women can be confusing
  
  – **Dementia** is a chronic progressive decline in cognitive function
  
  – **Delirium** is an acute decline in cognition with lack of attention and should be reversible
Objectives

1. Be aware of the updated DSM5 criteria for “dementia”

2. Identify indications for "screening" for dementia in older women


4. Recognize delirium in older women
Top 5 Resources for Patients and Families
#1 Promoting Wellness & Function

LIVING WELL
A Guide for Persons with Mild Cognitive Impairment (MCI) & Early Dementia

In Partnership with:

HealthPartners

University of Minnesota
#2 Addressing Behavioral Challenges
#3 Caregiver Support

Alzheimer’s Association
800.272.3900 | www.alz.org/mnnd

One stop shop for:
- Care Consultation
- Support Groups (Memory Club)
- 24/7 Helpline
References & Resources

References & Resources


References & Resources


Alzheimer’s Association

- Living with Alzheimer’s – Mid Stage: [https://www.alz.org/documents_custom/middle-stage-caregiver-tips.pdf](https://www.alz.org/documents_custom/middle-stage-caregiver-tips.pdf)
- Living with Alzheimer’s – Late Stage: [https://www.alz.org/documents_custom/late-stage-caregiver-tips.pdf](https://www.alz.org/documents_custom/late-stage-caregiver-tips.pdf)
- Trial Match: [http://www.alz.org/research/clinical_trials/find_clinical_trials_trialmatch.asp](http://www.alz.org/research/clinical_trials/find_clinical_trials_trialmatch.asp)
References & Resources

- Caring for a Person with Alzheimer’s Disease: [http://www.nia.nih.gov/sites/default/files/caring_for_a_person_with_alzheimers_disease_0.pdf](http://www.nia.nih.gov/sites/default/files/caring_for_a_person_with_alzheimers_disease_0.pdf)
- Coach Broyles Playbook on Alzheimer’s: [http://www.caregiversunited.com](http://www.caregiversunited.com)
- Honoring Choices Minnesota: [http://www.honoringchoices.org](http://www.honoringchoices.org)
- Hospitalization Happens: [http://www.nia.nih.gov/sites/default/files/hospitalization_happens_0.pdf](http://www.nia.nih.gov/sites/default/files/hospitalization_happens_0.pdf)
- MN Health Care Home Care Coordination Tool Kit: [http://www.health.state.mn.us/healthreform/homes/collaborative/lcdocs/cliniccarecoordtoolkit.pdf](http://www.health.state.mn.us/healthreform/homes/collaborative/lcdocs/cliniccarecoordtoolkit.pdf)
- Montreal Cognitive Assessment (MoCA) [http://www.mocatest.org](http://www.mocatest.org)
- Next Step in Care: [http://www.nextstepincare.org](http://www.nextstepincare.org)
- Physician Orders for Life Sustaining Treatment (POLST): [http://www.polst.org](http://www.polst.org)
- St. Louis University Mental Status (SLUMS) examination [http://medschool.slu.edu/agingsuccessfully/pdfsurveys/slumsexam_05.pdf](http://medschool.slu.edu/agingsuccessfully/pdfsurveys/slumsexam_05.pdf)