

Screening for the 3 D's: Dementia, Depression, & Delirium"

Fireside Chat Series with Dr. Randall Rupper, MD, MPH
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Special Thanks to Dr. Byron Bair, MD for the use of some
slides

Cognition

All Capacities A Person Uses To Interact With The Internal And External World

- Orientation
- Attention
- Memory
- Language
- Praxis
- Calculation
- Abstraction
- Sequencing
- Personality
- Judgement

Severity of Cognitive impairment =
functional impairment + need for supervision

Cognitive Disorders: The 6 D's

- Dementia
- Delirium
- Depression
- Damaged Brain
- Developmental Delay
- Deficient Education

Domains of Dementia Diagnosis

- Cognitive Impairment
- Functional Impairment
- Degeneration over time

Some Cognitive Screening Tests

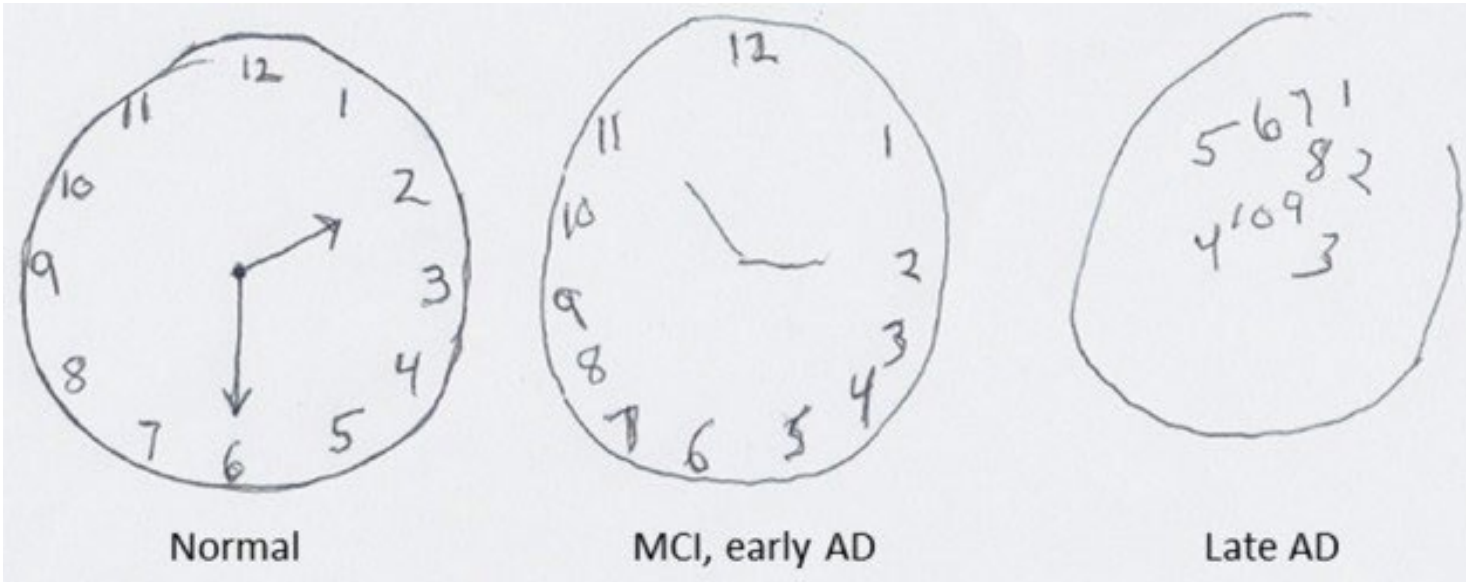
- Mini-mental state examination (MMSE)
- Montreal Cognitive Assessment (MOCA)
- Clock drawing task
- Functional activities questionnaire
- Recall of a five-item name and address +one-minute verbal fluency for animals
- Alzheimer's Disease Assessment Scale (ADAS)
- Brief Screen for Cognitive Impairment (BSCI)

Diagnostic Evaluation

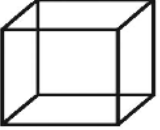
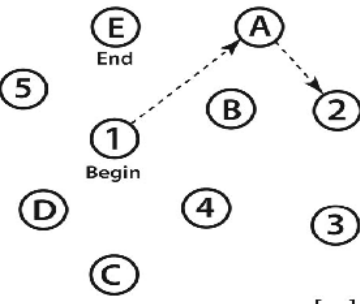
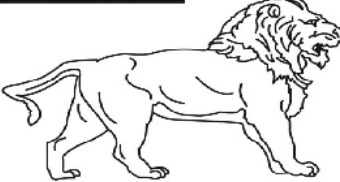
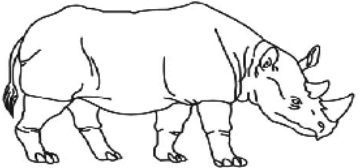
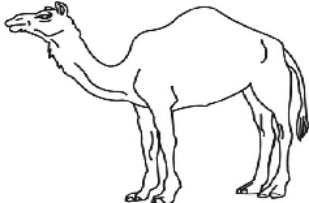
- History: Medications/Drugs
- Screens: MOCA, clock drawing, GDS etc.
- Physical Exam; Ortho BP's, rectal, ROM etc.
- Selected Labs: Lytes, CBC diff, UA, PVR, ABG, TFT's, B12, Folate, FTA, Toxic Screen, Drug Level, EKG, Chest X-Ray
- Consider: brain imaging, LP, chromosome identification

Mini-Cog

Drawing of a clock, from left to right, by someone with a healthy brain, someone with mild cognitive impairment, and someone in the late stages of Alzheimer's disease. Photo: Mattson M



- Three item recall (e.g. Apple, Penny, Table)
- Complete a clock-face for a given time

VISUOSPATIAL / EXECUTIVE		 Copy cube	Draw CLOCK (Ten past eleven) (3 points)	POINTS																	
 []	[]	[] [] [] Contour Numbers Hands	___/5																		
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.	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FACE</td> <td style="text-align: center;">VELVET</td> <td style="text-align: center;">CHURCH</td> <td style="text-align: center;">DAISY</td> <td style="text-align: center;">RED</td> </tr> <tr> <td style="text-align: center;">1st trial</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">2nd trial</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		FACE	VELVET	CHURCH	DAISY	RED	1st trial						2nd trial						No points
	FACE	VELVET	CHURCH	DAISY	RED																
1st trial																					
2nd trial																					
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	[] FBACMNAAJKLBAFAKDEAAAJAMOFAAB	___/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	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">FACE</td> <td style="text-align: center;">VELVET</td> <td style="text-align: center;">CHURCH</td> <td style="text-align: center;">DAISY</td> <td style="text-align: center;">RED</td> </tr> <tr> <td style="text-align: center;">[]</td> <td style="text-align: center;">[]</td> <td style="text-align: center;">[]</td> <td style="text-align: center;">[]</td> <td style="text-align: center;">[]</td> </tr> </table>	FACE	VELVET	CHURCH	DAISY	RED	[]	[]	[]	[]	[]	Points for UNCUED recall only								
FACE	VELVET	CHURCH	DAISY	RED																	
[]	[]	[]	[]	[]																	
Optional	Category cue																				
	Multiple choice cue																				
ORIENTATION	[] Date [] Month [] Year [] Day [] Place [] City		___/6																		
© Z.Nasreddine MD		www.mocatest.org	Normal ≥ 26 / 30	TOTAL ___/30 Add 1 point if ≤ 12 yr edu																	

Depression

- Can be a competing diagnosis for Dementia
- Can be a warning sign, or risk factor for Dementia

Hallmarks of Depression

- Captured by the PHQ-2
 - ***OVER THE PAST TWO WEEKS, HOW OFTEN HAVE YOU BEEN BOTHERED BY ANY OF THE FOLLOWING PROBLEMS?***
 - Little interest or pleasure in doing things?
 - Feeling down, depressed, or hopeless?
- If either of these is present, we move on to capture other domains with the PHQ-9 or Geriatric Depression Scale

Domains of the PHQ-9

- Lost pleasure or interest
- Feeling down, depressed, hopeless
- Trouble with sleep: too much or too little
- Tired or lacking energy
- Appetite change: too much or too little
- Feeling bad about yourself
- Trouble concentrating
- Moving or speaking slowly or being restless and fidgeting
- Thoughts that you would be better off dead or of hurting yourself.

Hallmarks of Delirium

- Acute onset and fluctuating course
- Inattention
- Disorganized thinking
- Altered level of consciousness

SHORT CONFUSION ASSESSMENT METHOD (SHORT CAM) WORKSHEET

Note: This worksheet can be used as an alternative to the Short CAM Questionnaire. Testing of orientation and sustained attention is recommended prior to scoring, such as digit spans, days of week, or months of year backwards. This page can only be used to identify delirium cases. Please note it cannot be used to score severity using the CAM-S scoring system.

EVALUATOR:

DATE:

I. ACUTE ONSET AND FLUCTUATING COURSE

a) Is there evidence of an acute change in mental status from the patient's baseline?

No ____

b) Did the (abnormal) behavior fluctuate during the day, that is tend to come and go or increase and decrease in severity?

No ____

II. INATTENTION

Did the patient have difficulty focusing attention, for example, being easily distractible or having difficulty keeping track of what was being said?

No ____

III. DISORGANIZED THINKING

Was the patient's thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?

No ____

IV. ALTERED LEVEL OF CONSCIOUSNESS

Overall, how would you rate the patient's level of consciousness?

-- Alert (normal)

- Vigilant (hyperalert)

- Lethargic (drowsy, easily aroused)

- Stupor (difficult to arouse)

- Coma (unarousable)

Do any checks appear in the box above? ↑

No ____

BOX 1

Yes _____

Yes _____

Yes _____

BOX 2

Yes _____

Yes _____

If Inattention and at least one other item in Box 1 are checked and at least one item in Box 2 is checked a diagnosis of delirium is suggested.

Dementia vs. Delirium

- Persons with Dementia are much more likely to develop delirium
- We draw a stark contrast, because delirium has an underlying cause that may be an emergency
 - Adverse effect to a medication
 - Infection
 - Pain
 - Metabolic disturbance
 - Exacerbation of a chronic disease

Dementia Treatment Considerations

- Treat Underlying Disorders
- Consider Delirium & Depression
- Use Multidisciplinary Teams
- Determine Operationally Defined Targets
- Monitor Targets For Efficacy of Treatments
- Use Multiple Modalities Simultaneously

Alzheimer's Treatment: Non-Pharmacological Models

- Environmental
 - Supervision: shadow vs direct
 - Stimuli: modification timing
 - Structure: routine and stability: activities
 - Safety: home, driving, weapons, medications
 - Stress: caregiver burnout
- Psychosocial
 - Support vs. confront
 - Redirect vs. correct

FDA Approved Agents

- All approved for “symptomatic” treatment of AD
- Cholinesterase Enzyme Inhibitors (ChEI)
 - Mild to moderate stages
- NMDA receptor modifiers (memantine)
 - Moderate to severe stages
 - Approved for use as a single or dual agent with ChEI
- Not FDA approved for other dementias
 - Vascular , Parkinson’s, Lewy Body, Mixed, Frontotemporal; however emerging literature