



Recognizing Dementia in Primary Care

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Learning Objectives

- Identify the characteristics, epidemiology, and presentation factors that indicate dementia.
- Become familiar with assessment tools for dementia.



Dementia Characteristics

- Progressive decline of intellectual ability from a previously attained level with no alteration of consciousness
- Interferes with patient's life: personal relationships, job, ability to perform activities of daily living



Decline in Cognitive Functions

- Memory
- Orientation
- Language
- Judgement
- Perception
- Attention
- Ability to perform tasks in sequence

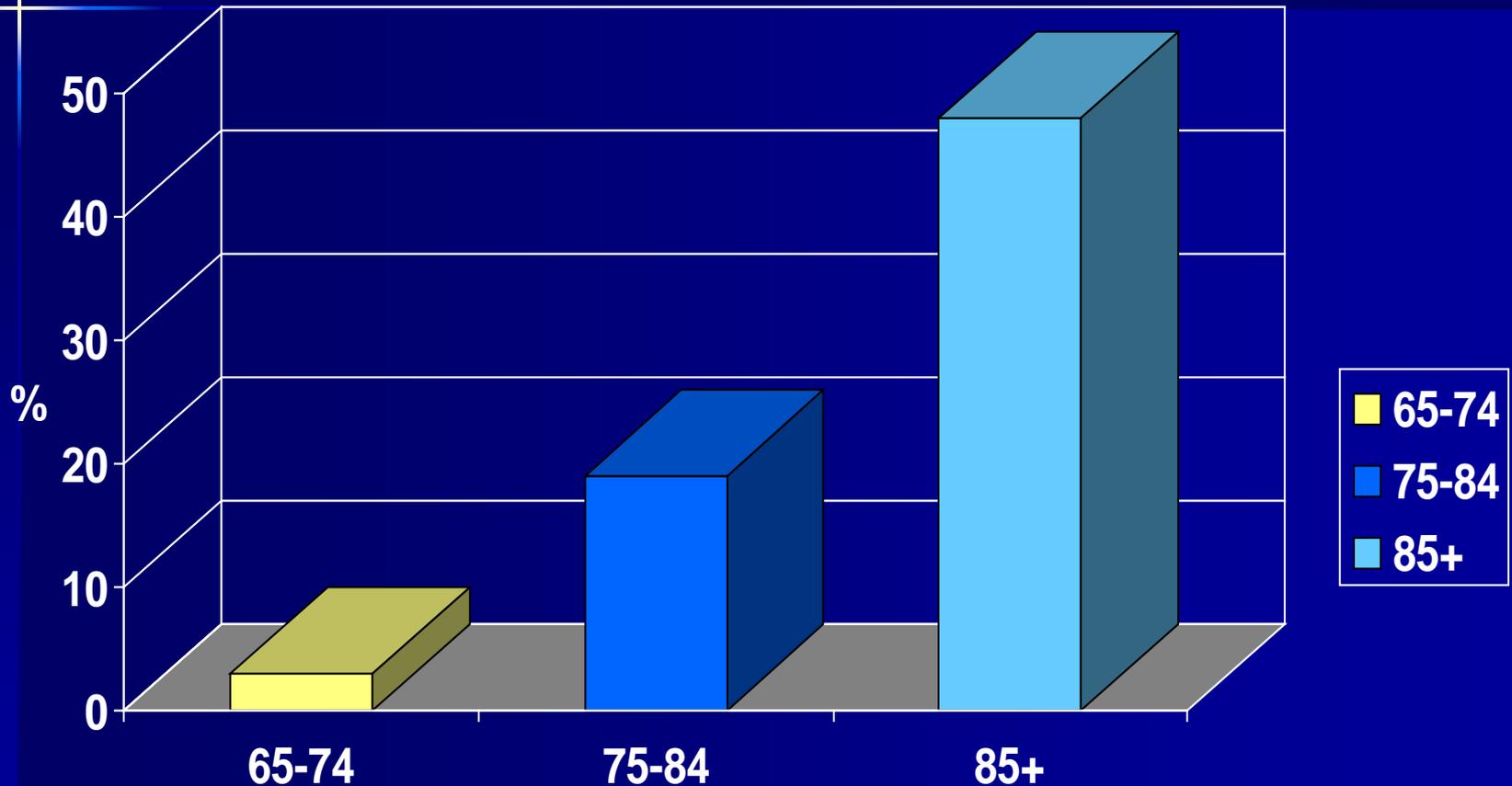
Epidemiology

- 4th leading cause of death in the elderly
- Life expectancy after diagnosis: 3-15 years
- Long term care costs for those >65 is \$40 billion per year

Wolfson, NEJM April, 2001



Prevalence of Alzheimer's Disease by Age
1% at age 60, doubles every five years. Curve flattens out by
age 90.



Evans, D.A. et al. (1989). *Journal of the American Medical Association*. Vol. 262: 2251-2256.

Dementia Is Often Missed!

- Mild symptoms are not recognized by PCPs 50% of the time.
- Reversible dementias have better outcomes when treated early
- Significant consequences for patients and caregivers



Dementia Is Missed By Families

- Cognitive decline may be considered normal aging by families
- Cultural factors affect reporting of dementia
- Social skills are preserved until late





Quick Clues to Dementia

- Difficult to obtain clear history of patient complaints
- Content-empty speech
- Slovenly appearance
- Loss of IADL function



Additional Clues

- Patient forgets appointments
- Poor compliance with treatment
- Patient is always accompanied by family member
- Patient drops favored activities
- Poor hygiene

Clinical Presentation

- Dementia onset is insidious
- Social skills are preserved until late in course
- Paranoia: "People are stealing from me"
- Concrete thinking (failure to abstract)
- Inability to complete complex tasks i.e. checkbook





Clinical Presentation (con't)

- EARLY:

- Mild forgetfulness, concentration deficits
- Repetitious or inconsistent behavior

- LATE:

- Impaired judgment & inability to abstract
- Personality change with rigidity, perseveration, irritability, and confusion
- Loss of self-care



Diagnostic Tools

- Mini Cog Exam
- Clock Drawing Test
- Animal Naming
- Mini Mental Status Exam
- Functional Assessment
- Geriatric Depression Scale

Mini Cog Exam

- A quick test with a high degree of certainty
- Combines the most sensitive parts of the MMSE and the Clock Drawing test
- The patient is asked to do the 3 item recall and draw a clock
- If no mistakes the probability of no dementia is >95%

MINI COG EXAM

THREE ITEM RECALL AT 1 MINUTE

LR (LIKELIHOOD RATIO)

RECALLS 0 or 1	LR = 3.1 of dementia
RECALLS 2	LR = 0.5
RECALLS ALL 3	LR = 0.06

CLOCK DRAWING TEST

ABNORMAL	LR = 24
ALMOST NORMAL	LR = .8
NORMAL	LR = .2

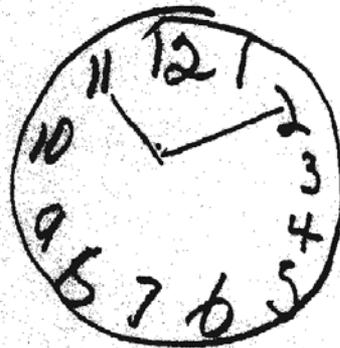
Clock Drawing Test

MoVIES ID# 245

Date 10 / 21 / 87

Age 75

MMSE 27/30



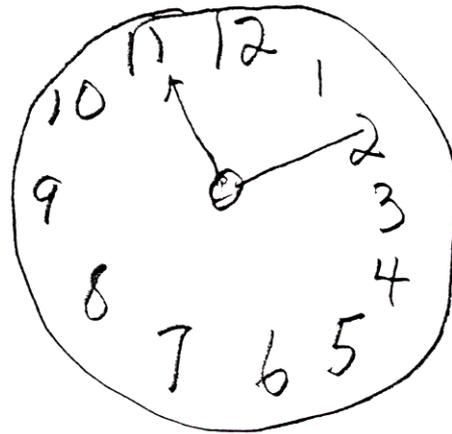
Clock Drawing Test: 7 Years Later

MoVIES ID# 245

Date 02 / 02 / 94

Age 81

MMSE 23/30



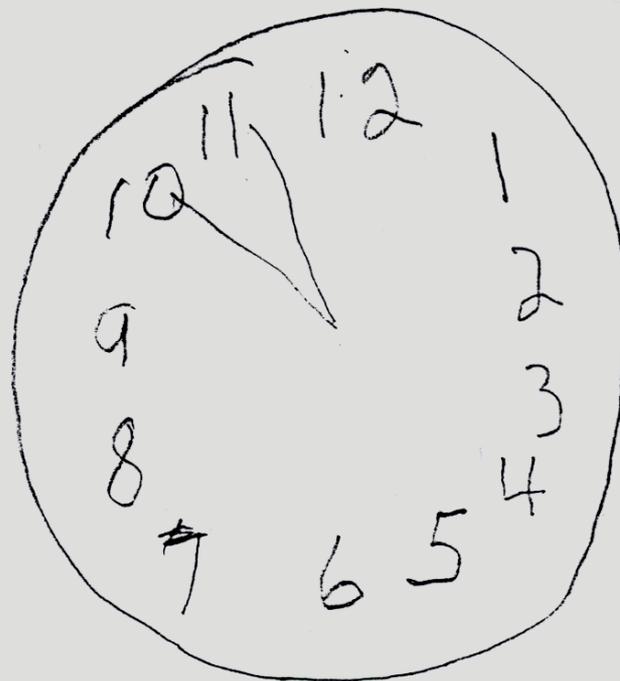
Clock Drawing Test: 9 Years Later

MoVIES ID# 245

Date 07/08/96

Age 83

MMSE 14/30



Clock Drawing Test: 11 Years Later

MoVIES ID# 245

Date 10 / 20 / 98

Age 86

MMSE 8/30

Clock



"ANIMAL NAMING"

- **"NAME AS MANY ANIMALS AS YOU CAN. GO!"**
- Average Score is 18 Words in One Minute.
- Less than 12 is Abnormal.
- Correlates well with MMSE.

Neurology.1989;39:1159-1165.



Mini-Mental Status Exam (MMSE)

Orientation: 5-item DATE and PLACE

Registration: Repeat 3 objects

Attention and Calculation: Serial 7's, "world" backwards

Recall: 3 objects

Language:

Name a pencil and watch, Repeat: "No ifs, ands, or buts."

Follow command: "Take a paper ...", Do the following: "Close your eyes", Write a sentence & Copy design.

Maximum Score: 30

- less than 24 points has high probability of cognitive deficit
- MMSE is education dependent & has been validated in other cultures

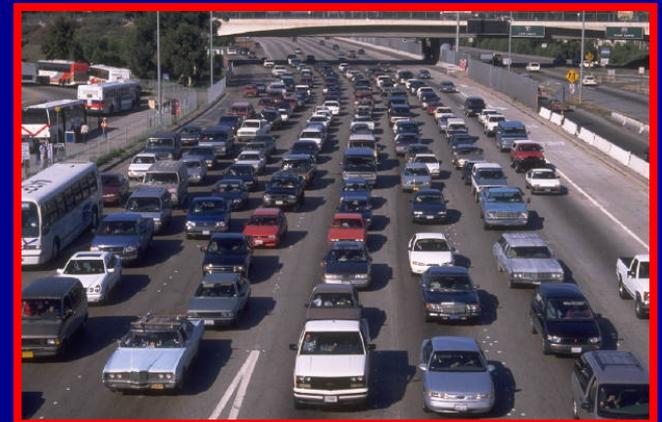
Functional Impairment Instrumental Activities of Daily Living

- IADLs – Impaired Early On
 - Using telephone
 - Shopping for all needs
 - Food preparation & Safety
 - Housekeeping
 - Laundry
 - Transportation
 - Medications
 - Managing money



Functional Assessment (con't)

- Pay attention to, understand, and discuss a TV show, book, or magazine
- Remember appointments, family occasions, holidays, and medications
- Drive, or use public transportation



Activities of Daily Living

- ADLs
 - Dressing
 - Toileting
 - Transfers
 - Continence
 - Feeding
 - Bathing
- Used to assess progression of dementia and determine degree of caregiver burden



Diagnostic Evaluation of Dementia

- H&P and info from caregiver
- Lab: CBC, CMP, TFTs, RPR, Vit B12, Folate
- CT of head
- Other tests as indicated:
 - EEG, Lumbar puncture, HIV
 - MRI, PET scan, or brain biopsy



Criteria for Probable Alzheimer's Disease

- Onset between ages 40 and 90
- Absence of other disorders to account for dementia
- Neuropsychological examination with deficits in at least two areas of cognition
- Progressive worsening of memory and other cognitive functions

NEED TO EXCLUDE

- Depression
- Medication & OTC's
- Alcohol abuse
- Delirium or Infection
- Tumors i.e., frontal lobe
- Metabolic disorders
- Head injury
- Vision or hearing problems





Types of Dementia

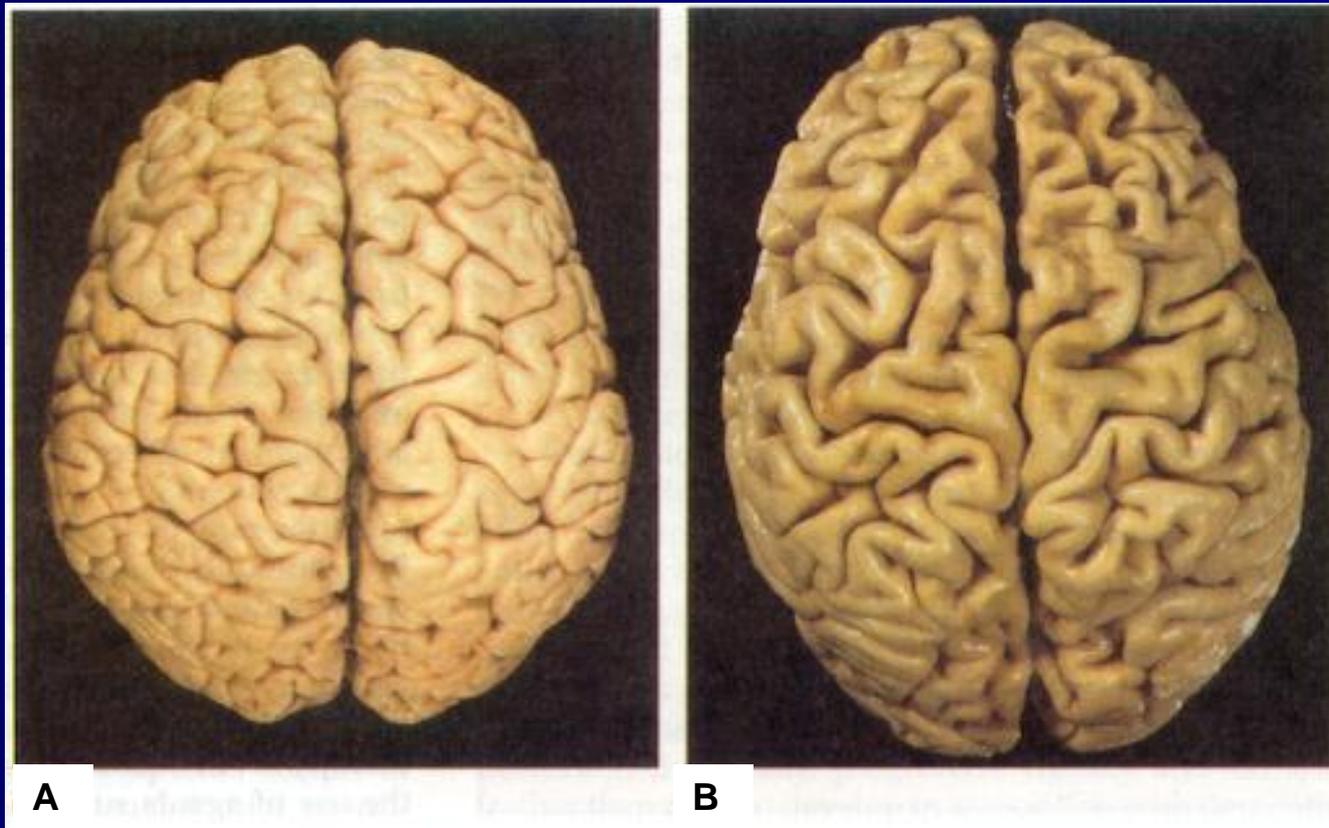
- Alzheimer's Disease
- Multi-infarct Dementia
- Diffuse Lewy Body Disease
- Normal Pressure Hydrocephalus
- Frontotemporal Dementia
- AIDs Dementia

Differential Diagnosis

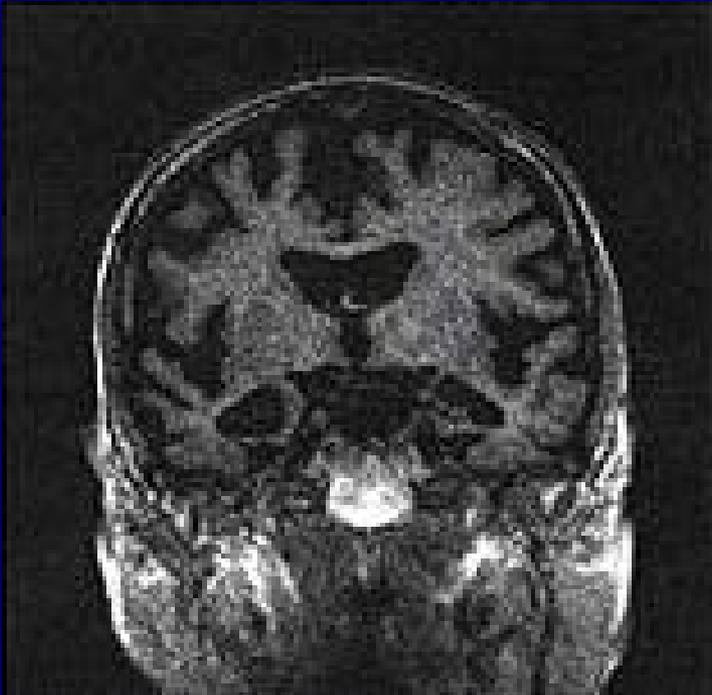
- Alzheimer's disease 70%
 - Multi-infarct dementia 10% - 20%
 - Brain tumors 5%
 - Unknown causes 10-15%
-
- Among the very old (over age 85), vascular dementia and Alzheimer's disease account for the vast majority

Alzheimer's Dementia

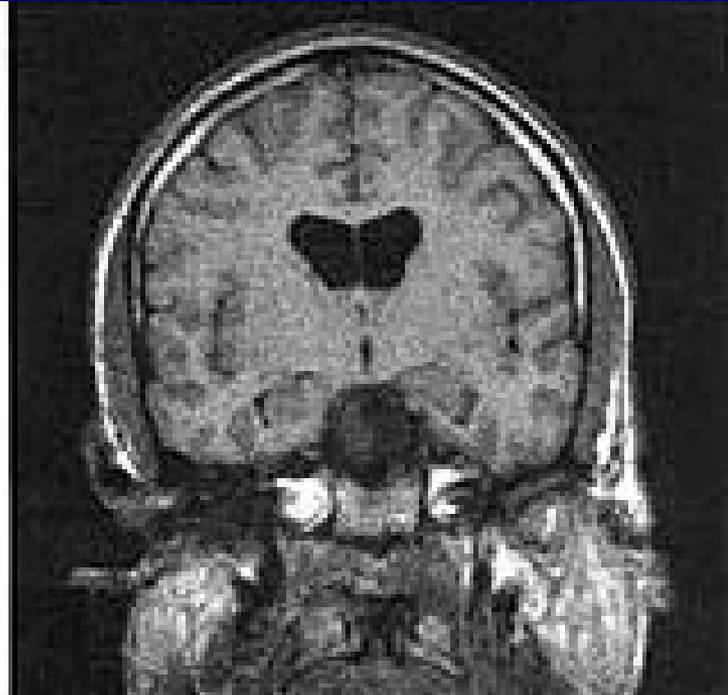
- Slowly progressive
- Linear decline in cognition



Alzheimer's CT Scan



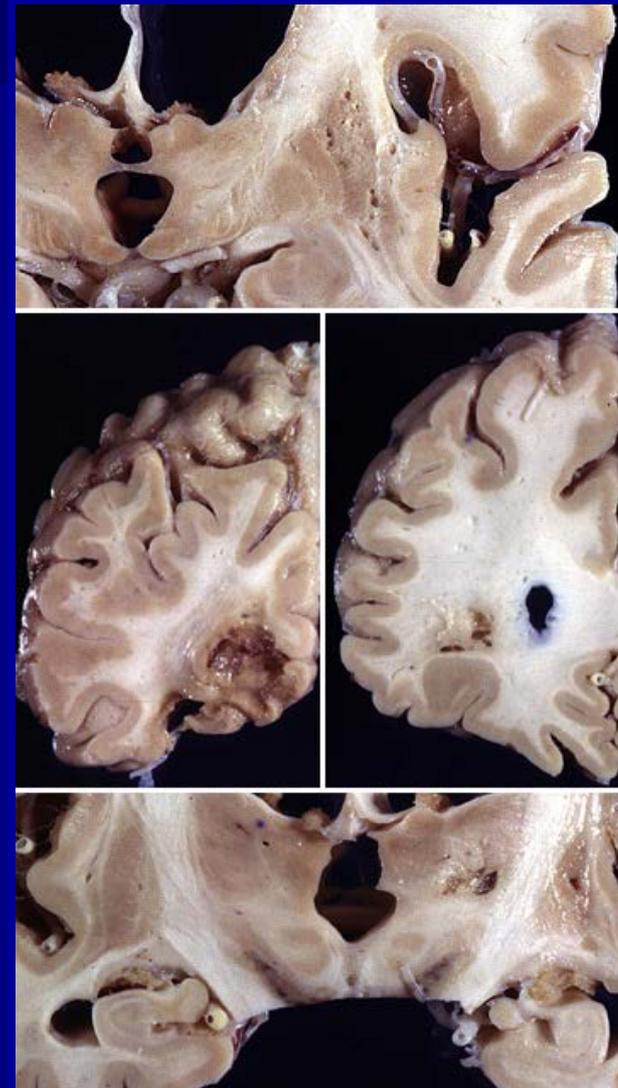
Brain with Alzheimer's Disease



Normally Aged Brain

Multi-infarct Dementia

Stepwise loss of cognition with each infarct



Normal Pressure Hydrocephalus

- “Wet, Wacky and Wobbly”
- Dementia with urinary incontinence and ataxia
- CT shows enlargement of lateral ventricles
- Can be treated



Diffuse Lewy Body Disease

- Like Alzheimer's, but more rapid
- Associated with a Parkinson's-like movement disorder
- Poor response to L-dopa
- Often have detailed visual hallucinations
- Do not use antipsychotics



Other Points to Cover

- SAFETY ISSUES:
 - Patient and Caregiver
 - Physical and verbal aggression
 - Elder abuse
- FAMILY CONTACTS
- ADVANCED DIRECTIVES
- SOCIAL WORKER FOR RESOURCES



Summary

- Be suspicious in older patients
- Use cognitive screening tools
 - Mini Cog, MMSE, Clock drawing
 - Deficits in two or more cognitive domains
- Carefully exclude reversible causes of dementia
- Refer to specialist if in doubt