Diagnosis and Management of Dementia

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Disclosures:
I am additionally employed by Abbvie Pharmaceuticals and am a presenter for medications that treat migraines. I will not be discussing or promoting any of this material today.

Objectives

❖   Define Dementia and identify types by their associated features

❖   Differentiate Dementia from other conditions that may mimic symptoms

❖   Integrate appropriate diagnostic testing with referrals

❖   Recognize traditional versus innovative treatment options and apply learned material to current practice
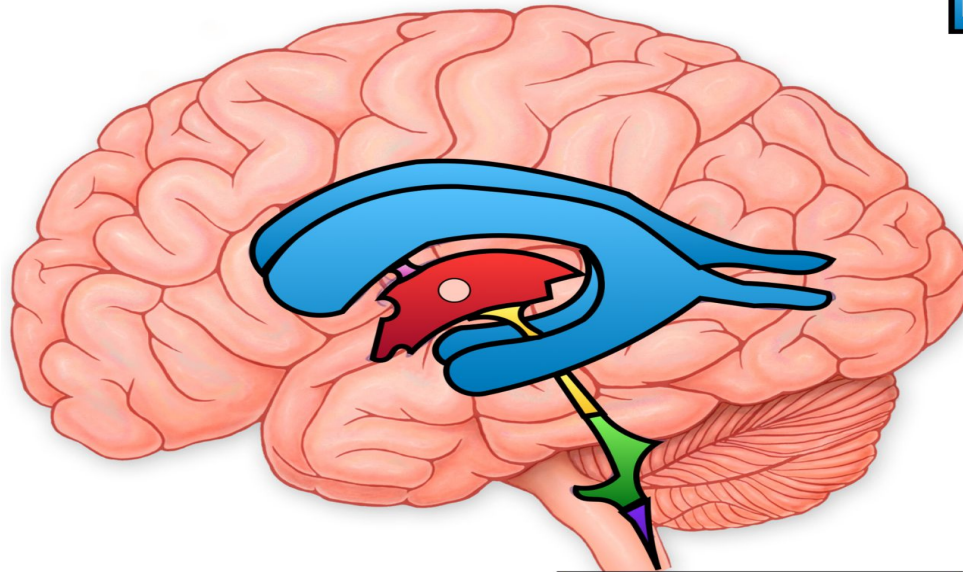
Dementia Definition

- Dementia is a general term (umbrella-term) for loss of memory, language, problem-solving and other thinking abilities that are severe enough to interfere with daily life.

Anatomy review

Frontal lobe

Parietal lobe

Temporal lobe

Occipital lobe
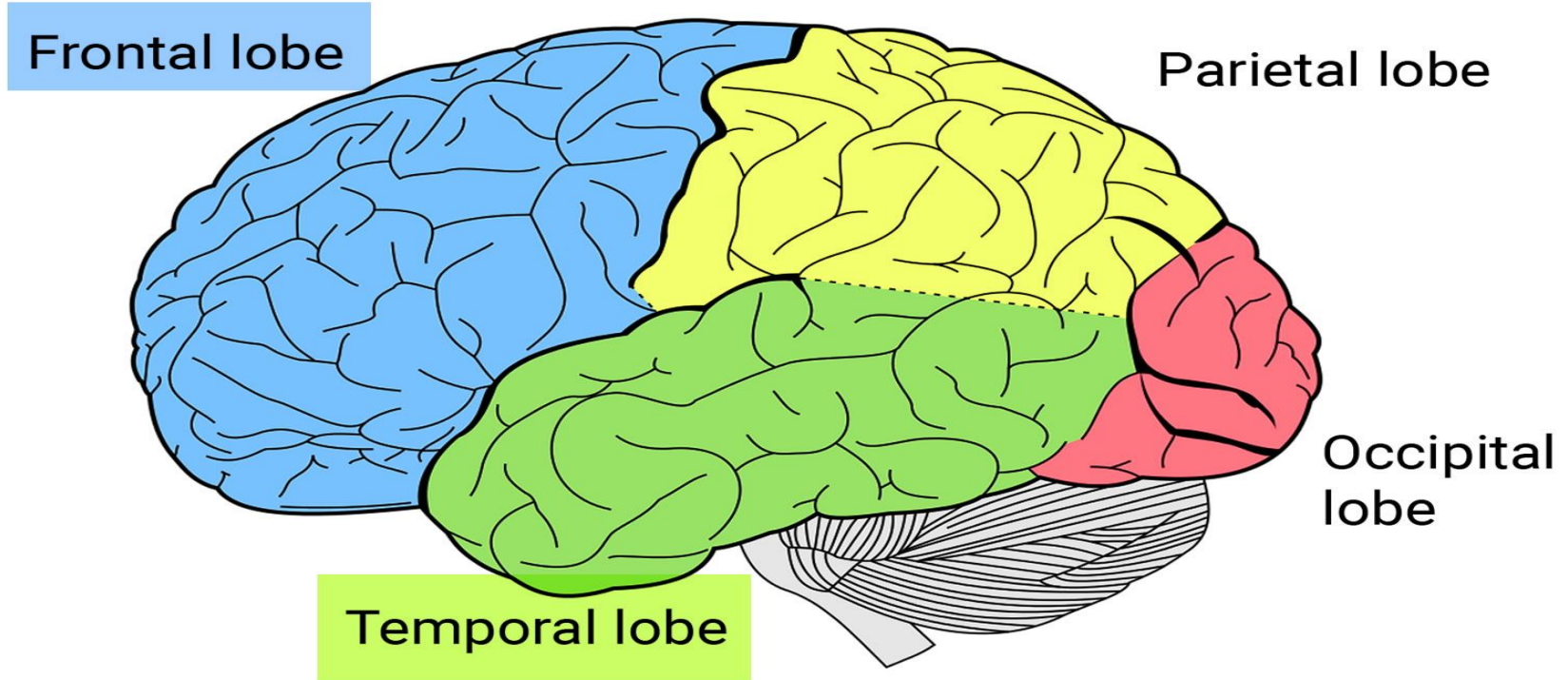
Ventricles

Lateral Ventricles (2) → Interventricular Foramina (2) → 3rd Ventricle → Cerebral Aqueduct → 4th Ventricle → Central Canal

Is it Dementia?

Case study #1

75 y/o male presents with difficulty with speech in the form of hesitation in completing sentences and stuttering (apraxia).

He stopped going to church, having difficulty paying his mortgage and has been eating salty and sweet foods with poor nutritional value.

Worsening gait with near falls, non-responsive to Levodopa trial. Symptoms have been worsening over the past 3 months but gait instability nearly a year.

On exam he had freezing of gait with symmetric bradykinesia and decreased vertical saccades.

MOCA revealed a scoring of 15 with difficulty with clock drawing, naming, language and abstraction.

Imaging revealed generalized cortical atrophy and midbrain atrophy.

15

Is it Dementia?

Case study #2

66 y/o retired school teacher presents to clinic with complaints of worsening memory over past 1-2 years. Finding it more difficult to enjoy his history books he used to be quite fond of. Using lists and a calendar to stay on task as he has forgot a few medical appointments and missed a dinner with his son.

Family history of mother with unknown type of Dementia.

Physical exam unrevealing.

Moca revealed deficits in Naming, Memory and Recall, total score 25.

CT and lab work up unrevealing.

Is it Dementia?

Case study #3

37 y/o male presents to office with 3 year complaints of cognitive decline. He worked as an industrial researcher who quit his job as he was starting to make calculation mistakes. He is unmarried and finds he is quite 'sexually promiscuous'. Moved back in with his parents. No significant etoh, substance or tobacco use history.

No family history of Dementia or psychiatric history.

His physical exam revealed slowed coordination and gait, poor hygiene.

Moca 17 with preserved language, severe deficits in delayed recall, visuospatial/executive, abstraction and language.

MRI revealed Generalized cortical atrophy and medial temporal atrophy.

Stages of Dementia

- Prodromal
- Mild
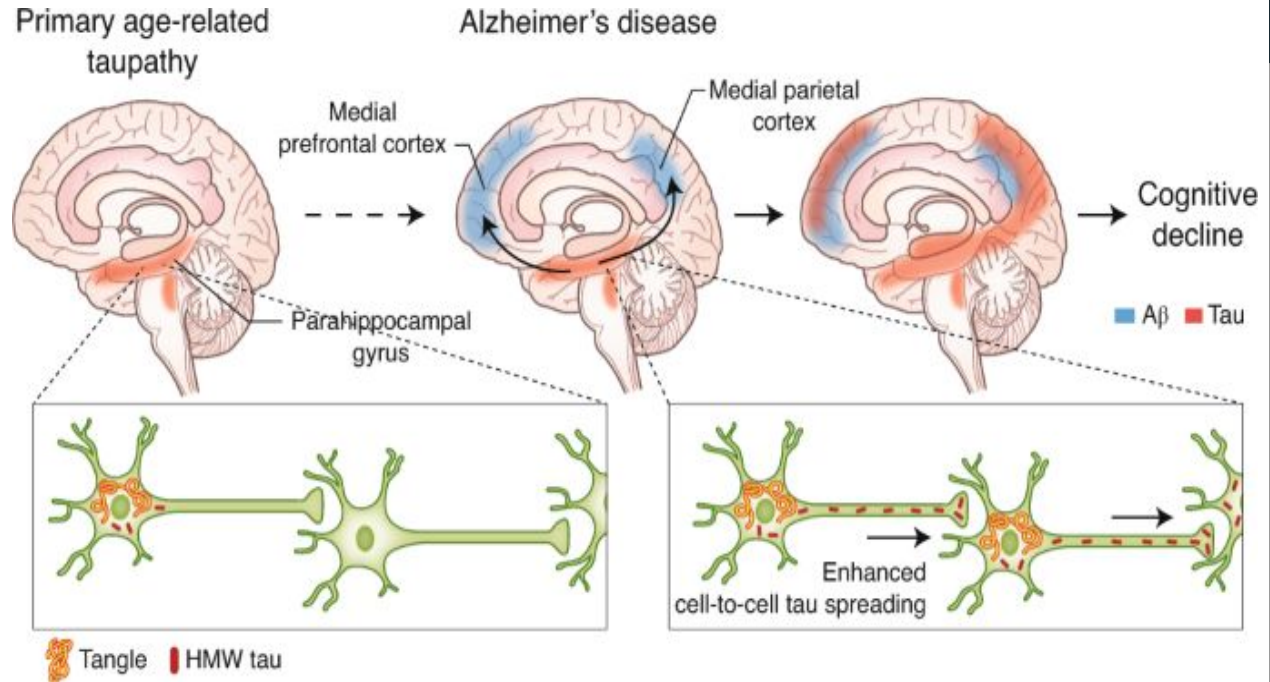- Moderate
- Severe

Types of Dementia
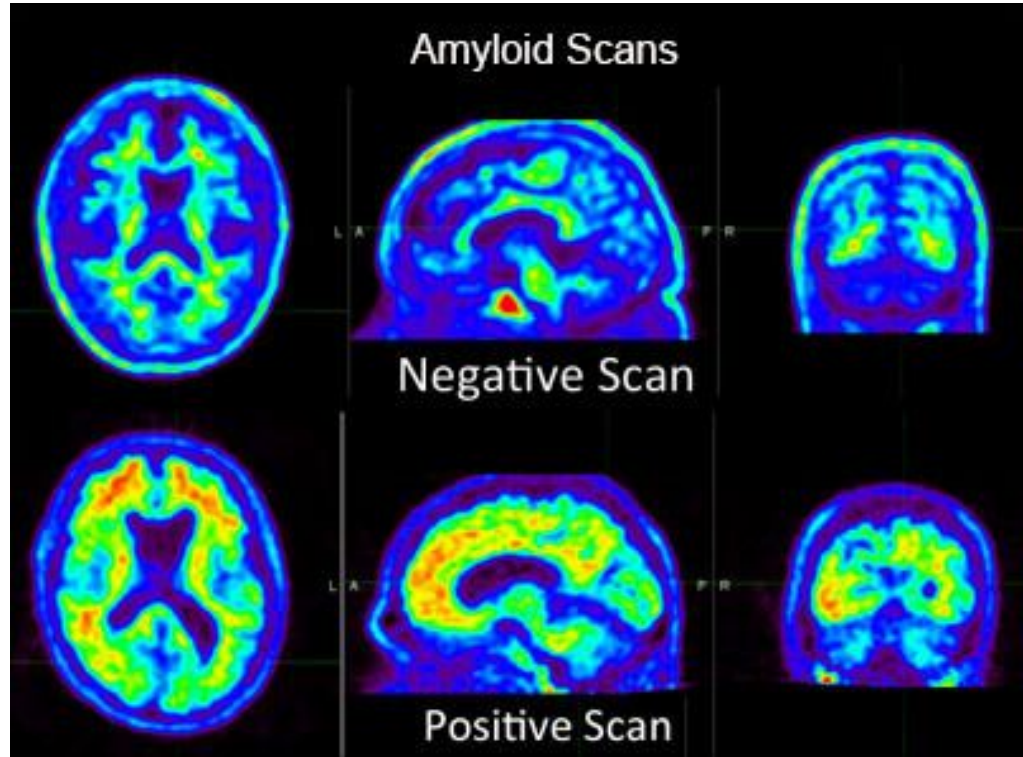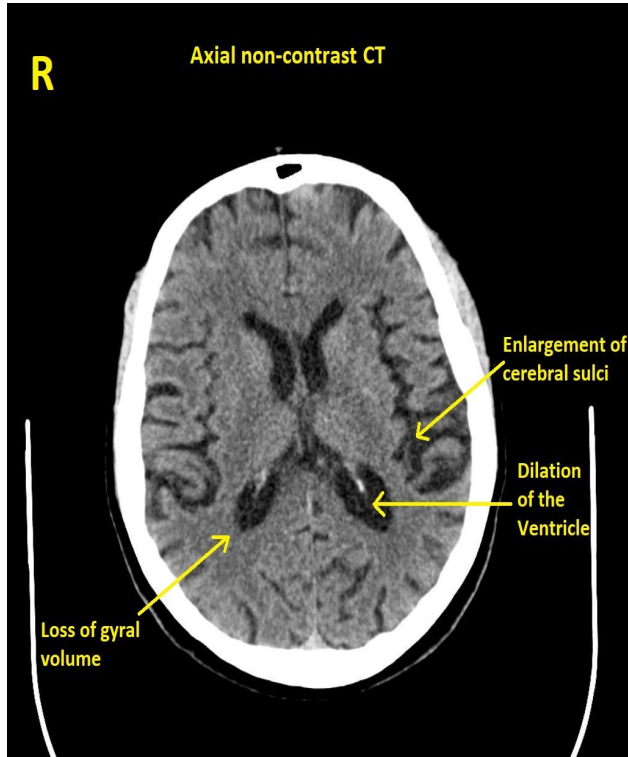
Alzheimer's

~Amyloid plaques

Tauopathy

~Most Common

Types:

- Classic
- Down's syndrome
- Posterior cortical atrophy(PCA)
- Frontal Variant
- Logopenic Variant PPA

9,13

Alzheimer's

Axial non-contrast CT

R

Enlargement of cerebral sulci

Dilation of the Ventricle

Loss of gyral volume

Amyloid Scans

Negative Scan

Positive Scan

Alzheimer's

Associated features:

Insidious/progressive over years

Amnestic, memory

Impaired Visuospatial, Reasoning and Handling of complex tasks
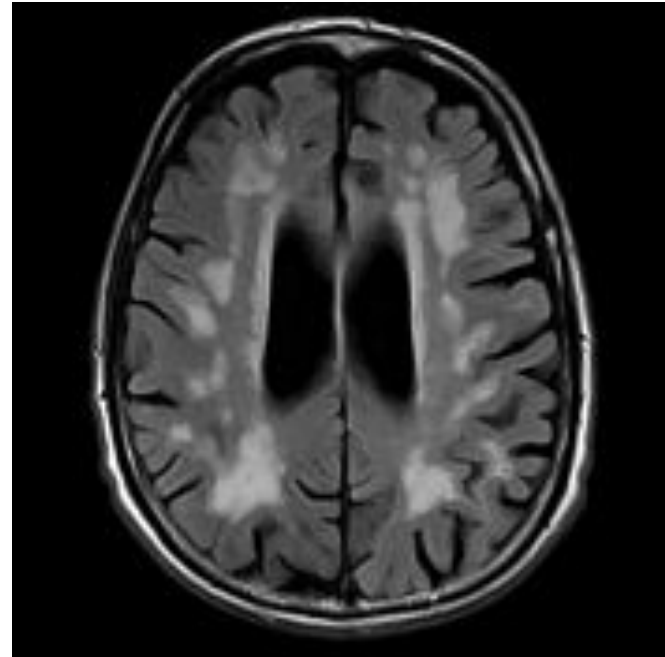
Language

Personality and/or Behavioral changes

Vascular

Types:

Atherosclerosis

Infarct

Subcortical

Cadasil

4,13

Vascular

Associated features:

Onset after stroke or vascular event

Not usually insidious

Gait disturbance, urinary symptoms

Change in speed of processing information, impaired complex attention, frontal-executive dysfunction

Personality/mood changes
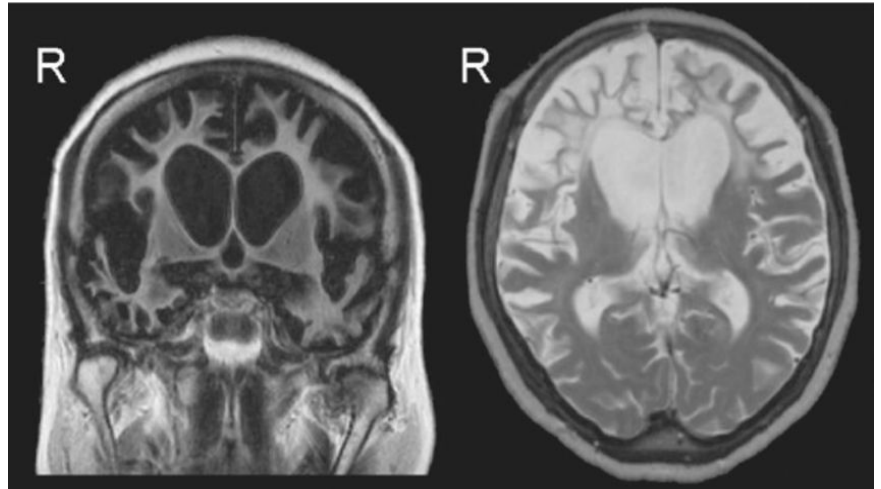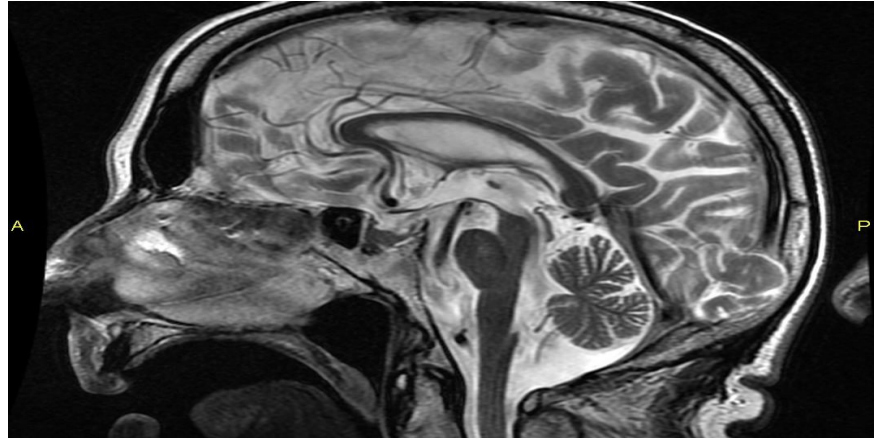
Frontotemporal

~Tau and Neurofilament, NOT Amyloid

~Second most common type of <u>Early Onset</u> Dementia next to Alzheimer's

Types:

- bvFTD- Behavioral variant-most common type
- Semantic variant PPA-primary progressive aphasia
- Nonfluent agrammatic variant-PPA
- Corticobasal syndrome-CBD
- Progressive supranuclear palsy-PSP
- FTD associated with motor neuron disease

6, 10,15

Frontotemporal

Associated features:

Gradual Behavior and Language dysfunction:

Loss of mannerism, even in public; Increased sexuality; Use of derogatory language, Impulsive, OCD, Visual/Auditory hallucinations; Dysarthria, Loss of word meaning, Misuse or replacement of nouns and verbs, Apathy-loss of interest, loss of sympathy or apathy; Poor PO consumption-sweets, spoiled food; Childlike, Increased consumption of ETOH, Drugs or Tobacco

Impairment in executive function

Sparing of episodic memory and of visuospatial function

Lewy Body

Types:

Diffuse Lewy Body (DLB)

Parkinson's Disease Dementia (PDD)
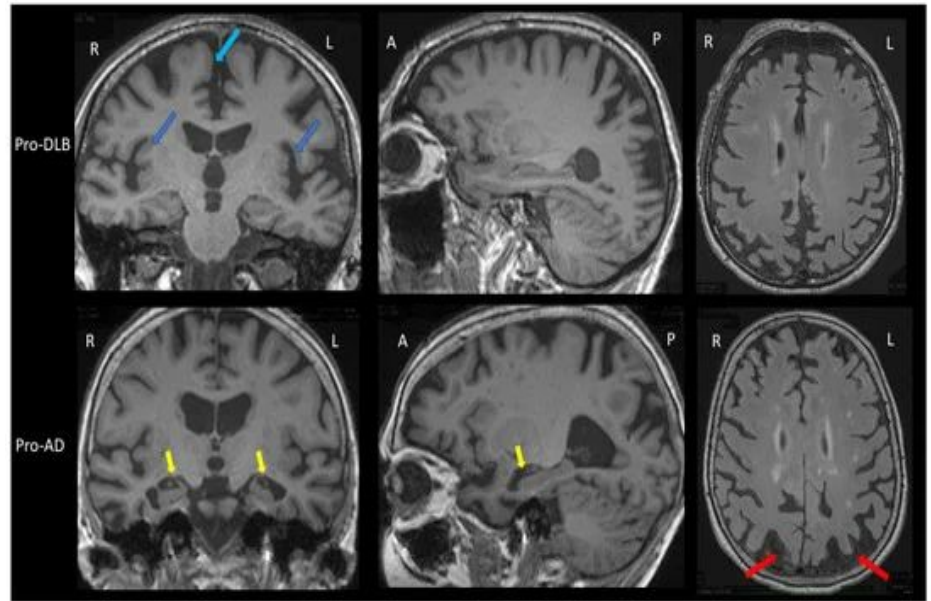
Lewy Body

Associated features:

Early onset with hallucinations, Extrapyramidal features at onset or shortly after diagnosis

Short term memory, Attention, Visuospatial, Executive Dysfunctions

Delusions later, Fluctuations, Obvious decrease in alertness-increased napping

REM behavior disorder

Depression

High sensitivity to neuroleptics

12,13

Conditions That Mimic Dementia

Cerebral infarction/TIA/Intracerebral hemorrhage

Autoimmune

Metabolic

Toxic

Infectious

NPH

Encephalopathy

HIV/AIDS

Syphilis

Frontotemporal brain sagging syndrome/Cerebral Hypotension

Traumatic

Endocrine/Autoimmune dysfunction

Menopausal

Multisystem X-linked disorder-cardiac involvement to stroke

Psychiatric

Iatrogenic

5,13

Mild cognitive impairment (MCI) VS Normal cognitive decline

Mild cognitive impairment

Decision making

Orientation

Asking repeated questions

Risk to develop dementia

Not optimal but still functional

Normal

Complexity

Multitasking

Others notice

Walk through door

Lose items, forget name-remember later

Diagnostic Testing

Appropriate Diagnostic Testing

CT, MRI, PET, CSF, Serum ATN(amyloid, tau, neurodegeneration panel)

Depression screen, Medication review (Anticholinergics, Polypharmacy),

LABS: Heavy metals, HIV, Syphilis, Lyme, TSH, PTH, B12, Thiamine (B1), Folate, Niacin, Phosphorous, Cortisol, CMP, CBC, ANA

9, 13

MOCA

- Review handout
- 90% accurate in detecting MCI
- Helpful tool

Others include but not limited to:

- Mini Cog (3 minutes)
- MMSE (Mini Mental State Exam)
- Slums (St.Louis University Mental Status Exam)

Treatment

Treatment

~Restrictions to this presentation include NO Naming of drugs
~Only class

Cholinesterase inhibitors -reversibly binds to and inactivates acetylcholinesterase

NMDA receptor antagonists - binds N-methyl-D-aspartate receptors, may slow Ca++ influx and nerve damage

SSRI/TCA -behavior management

Monoclonal antibodies-reduces amyloid plaques

7,8

Practice Approach

Primary Care Approach

Identify relative Differentials

Appropriate diagnostic testing

MOCA/MMSE

Sleep assessment

Psychological assessment

Referrals

Treatment options

Collaborative Approach

Collaborative Care Approach

Primary Care Provider

Neurology

Psychiatry

Speech Therapy

Physical/Occupational Therapy

Home Health Care

Social Services

Family

Caregivers/companions

Memory Care Clinic

Adult Day Care/ALF/SNF

Peninsula Agency on AGing

Martha Goodson Center

Care Navigators

Putting it all together: Case study review

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12, 16

Alzheimer's patient perspective

https://www.youtube.com/watch?v=4cq79brHcJc

When Gay received her diagnosis for Alzheimer's disease, her and her husband Quentin learned that as much as things change, sometimes they stay the same. Although dementia comes with its own set of challenges, the couple has found new ways to grow closer together with the ebb and flow of Alzheimer's.

A Special 'Thank You'
to all our
APP Colleagues

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