Understanding Different Dementias:

What’s Different?
What’s the Same?
How to Tailor Care for Each

PET and Aging

PET Scan of 20-Year-Old Brain
PET Scan of 80-Year-Old Brain

Not normal ...
changes starting

• Inconsistent
• Worse when tired or sick OR in unfamiliar or uncomfortable setting
MCI

• The beginning of NOT NORMAL COGNITION
  – Memory
  – Language
  – Behavior
  – Motor skills

• Not life altering – BUT definitely different... for you

Ten Early Warning Signs

• memory loss for recent or new information – repeats self frequently
• difficulty doing familiar, but difficult tasks – managing money, medications, driving
• problems with word finding, mis-naming, or misunderstanding
• getting confused about time or place - getting lost while driving, missing several appointments
• worsening judgment – not thinking thing through like before
• difficulty problem solving or reasoning
• misplacing things – putting them in “odd places”
• changes in mood or behavior
• changes in typical personality
• loss of initiation – withdraws form normal patterns of activities and interests

Is This ALWAYS Dementia?

• Some form of DEMENTIA
• Symptom of another health condition
• Medication side-effect
• Hearing loss or vision loss
• Depression
• Delirium
• Pain-related
TWO Mimics to KNOW
(copy cats & concurrent illnesses)

- Delirium = rapid changes in thinking & alertness
  (seek medical help immediately)

- Depression = chronic unless treated, poor quality, I "don't know", I just can't responses, no pleasure
  Typical and atypical sad
  mad - can look like agitation & confusion
  (this condition can improve with attention & treatment)

- These signal a vulnerable brain – heads up!

Delirium – rapid changes in thinking, poor quality
  - on & off responses
  - delusions
  - hallucinations
  - infection
  - toxic reactions
  - dangerous

Mimics of Dementia

- Depression
  - can't think
  - can't remember
  - not worth it
  - loss of function
  - mood swings
  - personality change
  - change in sleep

- Delirium
  - swift change
  - hallucinations
  - delusions
  - toxic reactions

Drugs that can affect cognition

- Anti-arrhythmic agents
- Antibiotics
- Antihistamines - decongestants
- Tri cyclic antidepressants
- Anti-hypertensives
- Anti-cholinergic agents
- Anti-convulsants
- Anti-emetics

- Histamine receptor blockers
- Immunosuppressant agents
- Muscle relaxants
- Narcotic analgesics
- Sedative hypnotics
- Anti-Parkinsonian agents

Dementia – What Changes?

• Structural changes – permanent
  – Cells are shrinking and dying
• Chemical changes - variable
  – Cells are producing and sending less chemicals
  – Can ‘shine’ when least expected – chemical rush

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Alzheimer’s – Two Forms

Young Onset
Late Life Onset
Positron Emission Tomography (PET)
Alzheimer’s Disease Progression vs. Normal Brains

Young Onset

- 3 groups – genetics, Down’s, life style
- Young family – kids often involved
- Mis-diagnosis & non –diagnosis is common
- Work may be first place to notice
- Relationships are strained early - misunderstanding
- Services are a problem – usually
- Finances are problematic
Alzheimer’s

• New info lost
• Recent memory worse
• Problems finding words
• Mis-speaks
• More impulsive or indecisive
• Gets lost
• Notice changes over 6 m – 1 yr
• Lasts 8-12 years

Typical treatment for Alzheimers

• Start with AChEI as soon as diagnosis is made
• If side-effects are too much – try another one
• Stay on the AChEI until --- 2 groups of thought
  – Placement in a ‘facility’
  – Considering other med stops – near end
• Add Namenda – mid-stage disease
• Stay on Namenda – as above

Normal Brain Cells

Neurotransmitters (AChE) being sent – message being communicated to the next cell
Normal Brain Cells

Once the message is sent, then enzymes lock onto the messenger chemicals and take them out of circulation so a new message can be sent.

Brain Cells with Alzheimer’s

Less neurotransmitter

Further to go to get to the next cell

Enzymes (AChE inhibitors) – get to them BEFORE they deliver their message

What do Alzheimer’s drugs DO?

Alzheimer’s drugs provide FAKE messenger chemicals that distract the enzymes. They attach to the FAKE AChE & the message can get thru.

Arimip, Exelon, Reminyl (Razadyne)
One Other Dementia Drug

- Memantine - Namenda
  - from Europe - 10 years of research
  - came 4.5 years ago to the US
  - different effect
  - moderates glutamate absorption
  - Works best in combination with AChE inhibitors

Vascular Dementia

- Sudden changes – stepwise progression
- Other conditions: DB, HTN, heart disease
- So, damage is related to blood supply/not primary brain disease: treatment can plateau
- Picture varies by person (blood/swelling/recovery)
- Can have bounce back & bad days
- Judgment and behavior ‘not the same’
- Spotty loss (memory, mobility)
- Emotional & energy shifts

Vascular dementia

CT Scan
The white spots indicate dead cell areas - mini-strokes
Latest Thinking About Vascular Treatment?

• Lots of similarity with Alzheimer’s
• Manage blood flow issues CAREFULLY!
• Watch for and manage depression

Lewy Body Dementia

• Movement problems - Falls
• Visual Hallucinations – animals, children, people
• Fine motor problems – hands & swallowing
• Episodes of rigidity & syncopy
• Nightmares or Insomnia
• Delusional thinking
• Fluctuations in abilities
• Drug responses can be extreme & strange
  – Can become toxic, can die, can become unable to move
  – Can have an OPPOSITE reactions
Latest Thinking about Lewy Body Treatment

- Use AChe
- Add Namenda early
- BE VERY careful about anti-psychotic meds
- Parkinson’s meds – may help movement BUT may make hallucinations and delusions worse
- Anti-depressants & Anti-convulsants – may be used to help anxiety, sleep, & depression – can increase confusion, movement & drowsing

Fronto-Temporal Dementias

- Many types
- Frontal – impulse and behavior control loss (not memory issues)
  - Says unexpected, rude, mean, odd things to others
  - Dis-inhibited – food, drink, sex, emotions, actions
- Temporal – language loss
  - Can’t speak or get words out
  - Can’t understand what is said, sound fluent – nonsense words

FTDs

- FvFTD – frontal variant of FTD
- FTD – frontal-temporal lobe dementia
- TLD – non-fluent aphasia
- TLD – fluent aphasia
Temporal Lobe
Non-Fluent Aphasia

• Can’t NAME items
• Hesitant speech
• Not speaking
• Worsening of speech production over time
• Echolalia
• Mis-speaking
• Word salad
• Receptive inability
• Other skills intact – early
• 25% never develop global dementia

Temporal Lobe
Fluent Aphasia

• Has smooth delivery
• More nonsense words
• Word salad
• May think they make sense
• Expect rhythm back
• Fixates on a few phrases
• Chit-chats if enjoying company
• Volume control varies – limited awareness of others’ needs
• There are frequently 1-2 ‘value words’ mixed in to speech
• Picks up on ‘value words’ they hear – they then connect & want to talk more

FvFTD

• Mis-behavior
• Impulsivity
• Dis-inhibition
• Inertia
• Obsessive compulsive behaviors
• Inattention
• Lack of social awareness
• Lack of social sensitivity
• Lack of personal hygiene
• Becomes sexually over-active or aggressive
• Becomes rigid in thinking
• Stereotypical behaviors
• Manipulative
• Hyper-orality
• Language may be impulsive but unaffected OR may be reduced or repetitive
FTD (Pick’s Disease)

Frontal Issues
- Poor decision making
- Problems sequencing
- Reduced social skills
- Lack of self-awareness
- Hyper-orality
- Ego-centric
- Dis-inhibited – food, drink, words, actions
- OCD behaviors early
- Excessive emotions

Temporal Issues
- Reduced attempts to talk
- Reduced content in speech
- Poor volume control
- Public use of ‘forbidden words’
- Sing-song speech
- Can’t understand others’ words

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Latest Thinking About FTD Treatments

• Consider Namenda earlier
• Look at SSRI medications
• May use medications used to treat OCD
• May NOT use AChI Medications

What if it doesn’t seem to be one of these?

• Atypical or other dementias
• Mixed picture

Other Dementias

• Genetic syndromes – Huntington’s Chorea
• ETOH related –
• Drugs/toxin exposure – heavy metals, pesticides
• White matter diseases - MS
• Mass effects – tumors & NPH
• Depression and Other Mental Conditions
• Infections – BBB cross – C-J, HIV/AIDS
• Parkinson’s – 40%
Lots of other dementias

- 70 + forms, types, causes....
- Some progress very rapidly
- Some are genetic some are not
- Some are unique, some follow more traditional patterns

Mixed picture

- Can have multiples
- Can start with one and add another
- Can have some symptoms – not all
- Also can have other life-long issues and then develop dementia (Down’s, Mental illness, personality disturbances, substance abuse)

So, You are NOTICING CHANGES...

What Should You DO?
Get it assessed –
Go see the doctor!
Why Bother Getting a Good/Complete Diagnosis

- Future plans
  - Progression & prognosis
  - Finances
  - Health
- Being in control
- Medications can make a difference in quality of life

What Should Happen When You Go to See the Doctor?

If you are concerned but <65
- Screening of your thinking
- Simple ones
  - Animal fluency
  - Orientation & 3 item recall
  - Clock drawing
- Short but helpful
  - MMSE
  - SLUMS
- Open discussion about who, what when, where, why?

If you are >65
- Screening of your thinking
- Simple ones
  - Animal fluency
  - Orientation & 3 item recall
  - Clock drawing
- Short but helpful
  - MMSE
  - SLUMS
- Open discussion about who, what when, where, why?

If the Screen Indicates Concerns...

- R/O other 2 D’s, Look at Meds
- Complete work-up & follow up
  OR
- Send for a full Neuro-psychological eval
  THEN follow up with you
  OR
- Refer to a specialist
Try to get a Work-Up –
A Diagnosis

• Two possible situations...
  – Aware and cooperative
  – Not aware and NOT interested or willing

Getting a Diagnosis
What Should Happen?
What Should NOT?

What Should be DONE...

• A complete physical, medical, & psychological history
• A good history from the person and the family of the ‘problem’
• A thorough PE neurological & cardiac exams with blood work
• A complete medication review
• Imaging study (CT, MRI, PET)
• Neuropsychological testing – what works and what doesn’t
• FOLLOW-UP and counseling or at least a referral
What Should We Do If We Suspect Something Might Be Happening?
• Be supportive
• Be an ADVOCATE
• Work Out Health Care Support – HC-PoA
• Check with the Doctor – Raise Your Concern
• Consider a Neuropsychological Assessment
• Consider Seeing a Specialist – geriatrician, neurologist, gero-psychiatrist

When Should You Consider getting a Second Opinion?
• When what we talked about didn’t happen
• When you feel un-listened to about concerns
• When you are not offered options that seem reasonable
• When you think or feel that the MD is not skilled enough to do a good job of managing this
• When it is an atypical dementia