



Management of Dementia

Suvarna Alladi

Professor of Neurology,
National Institute of Mental Health and Neurosciences

Ka BHI

How patients present to us

- Doctor, I have become forgetful
- My mother is behaving oddly
- I can't seem to find the right word
- My father loses his way



Recent advances in Alzheimer's Disease



Breakthroughs



From Nihilism to Hope

Building evidence



Consolidation



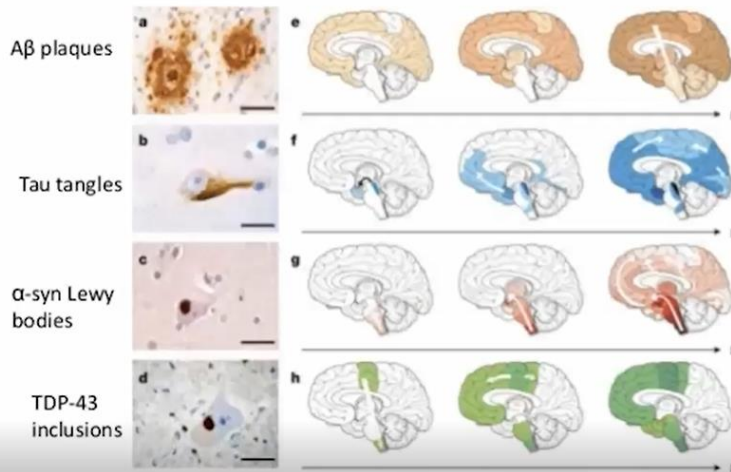
Management of Dementia

Core components of dementia care

1. Pharmacotherapy
2. Educational interventions
3. Nonpharmacologic interventions, including rehabilitation

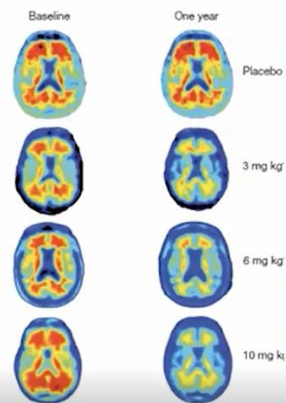
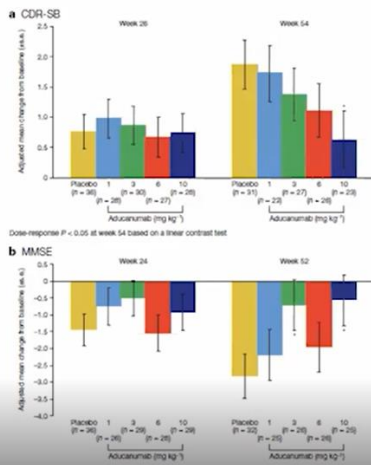
Cooperation among neurologists, other health care professionals and care providers is vital for benefit of patients

Pathology will drive treatment strategies



Alzheimer's Disease Breakthrough: Antibody aducanumab

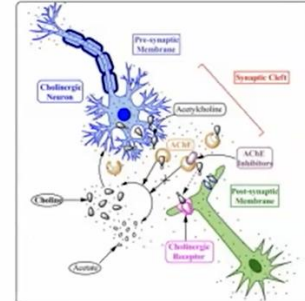
Aducanumab, a human monoclonal antibody that selectively targets aggregated Aβ.



Sevigny J, Nature 2016

Pharmacotherapy of dementia: Symptomatic

- Cholinesterase inhibitors (donepezil, rivastigmine and galantamine)
- Acetylcholine, helps to send messages between nerve cells.
- In Alzheimer's disease some of the nerve cells that use acetylcholine are also lost. Because of these changes in the brain, symptoms of Alzheimer's disease get worse over time.
- Donepezil, rivastigmine and galantamine all prevent an enzyme called acetylcholinesterase from breaking down acetylcholine. This means there is a higher concentration of acetylcholine in the brain, which leads to better communication between nerve cells. This may ease some symptoms of Alzheimer's disease for a while.
- All three cholinesterase inhibitors work in a similar way. However, one drug might be better for someone than another. For instance, a person may have fewer side effects from one drug



How much do they help

- 40–70% of people with Alzheimer's disease who take a cholinesterase inhibitor find it helps them.
- Where the treatment helps someone, symptoms improve temporarily (usually for between six and 12 months). This effect then wears off a bit, so symptoms gradually get worse over the following months (even though the person is still taking the medication). People who take a cholinesterase inhibitor may find it helps with:
 - anxiety
 - motivation
 - memory and concentration
 - ability to continue daily activities (such as managing money, shopping or cooking).

Role of PHC physician

- Once the person has started on the drugs and is on the right dose for them, the physicians take over prescribing them.
- The person should then have regular reviews of how well their medication is working
- The assessment should be based on a broader view of the person's condition. This should include their mental abilities, behaviour and ability to cope with daily life. It should also not be based on one single thing changing – such as the person's mental ability test score going below a certain number.
- The doctor should ask the person (or their carer) for their views at the start of drug treatment and at check-ups.

Side effects

- **M**ost people can take cholinesterase inhibitors and memantine without too many side effects. Not everyone has the same side effects, or has them for the same length of time.
- The most common side effects of donepezil, rivastigmine and galantamine are: loss of appetite, nausea, vomiting, diarrhoea.
Other side effects include muscle cramps, headaches, dizziness, fatigue and insomnia. Side effects can be less likely for people who start treatment by taking the lower prescribed dose for at least a month
- The side effects of memantine are less common and less severe than for the cholinesterase inhibitors. They include: dizziness, headaches, tiredness, raised blood pressure, constipation.

Future of pharmacological treatment of AD

- AD is in nature a complex disorder
- Dysregulation of multiple pathways
- In 2020, there are 121 unique therapies in clinical trials for AD
- Conventional drugs directed to a single molecular target are likely inadequate
- Concept of a poly-pharmacological approach using either combinations of multiple drugs or single small molecules modulating multiple targets, is emerging



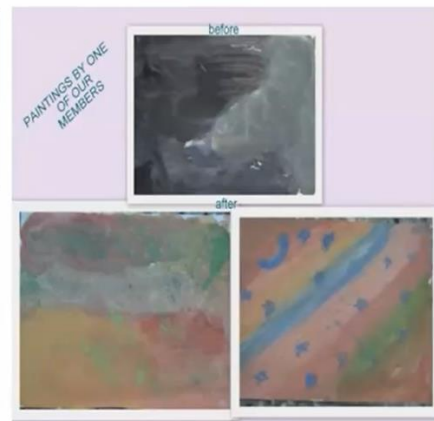
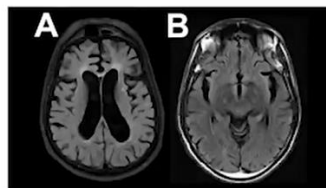
Doctor is this all you can do for my mother -2006

Speech therapy

- Raat-ZB Din
- Humhaara-ZB Tumhaara

Sentence completion

- Khargosh aage aage- ZB: Kachua Peeche Peeche
- Slow and Steady-ZB: Wins the race

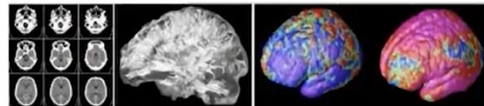
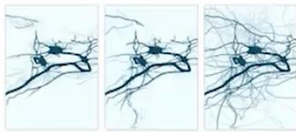


Nonpharmacologic interventions improve outcomes

Plasticity → Ability

Cognitive Interventions delay progression of Dementia

Lancet Neurology 2010



“Every man can be the sculptor of his own brain”

Ramon Cajal

Case 1

65 yr old Mr R, a retired bank officer

- Reports that he has problems recollecting recent conversations
- Has problems remembering names of relatives or acquaintances
- Complains that remembering his bank account number has become difficult
- Forgot that a relative visited them a few days back

Which domain of cognition is affected

- 1. Memory
- 2. Attention
- 3. Language
- 4. Visuospatial