# Managing dementia: the next steps

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# Definition of dementia

A disorder characterised by decline in cognition involving one or more cognitive domains:

- learning and memory
- complex attention
- perceptual-motor
- language
- executive function
- social cognition

Note that deficits must:

represent a decline from previous function

be severe enough to interfere with daily function and independence

be distinct from delirium or other mental disorder e.g. depression

# Typical examples of reported changes

Problems retaining new information – appointments, recent events

Struggling with complex tasks  - balancing a chequebook, following a recipe

Deficiency in reasoning – unable to cope with the unexpected

Altered spatial ability and orientation - getting lost in familiar places

Language issues - word finding problems

Altered behaviour – increased frustration, verbal or physical aggression

Most dementia is Alzheimer’s Disease &/or cerebrovascular disease …

… but sometimes it’s not

… and sometimes it’s complicated

# Laboratory testing

There are no clear data to support or refute "routine" tests and yield is generally low (<1%)

However, most guidelines suggest checking for B12 deficiency (FBC and B12 levels) and hypothyroidism (TSH)

Tailor other tests to any relevant history, e.g:

- screen for neurosyphilis if high clinical suspicion
- check calcium in multiple myeloma, prostate cancer, or breast cancer
- EEG and LP in younger patients or those with rapidly progressive symptoms

Genetic testing for Alzheimer’s Disease is controversial and not currently recommended because of relatively low sensitivity and specificity

# Neuroimaging

Controversial and not routinely recommended.

Consider if potential to reveal a treatable alternate diagnosis (e.g subdural hematoma, normal pressure hydrocephalus, cancer) in a patient who would tolerate the treatment.

Non-contrast CT or MRI typically show non-specific atrophy and/or background ischaemic changes.

Functional neuroimaging still mainly research tools. Be aware that many patients and families will expect imaging.

# Brain biopsy

Very limited role

Diagnostic yield is very low,

Invasive with significant risk of serious complication.

Typically reserved for younger, atypical patients in whom a treatable inflammatory disorder (e.g. vasculitis or multiple sclerosis) is considered plausible.

# Treatment of Alzheimer’s Disease

Non-pharmacological

- Formal support services
- NGOs

Medications:

Cholinesterase inhibitors

- Donepezil
- Rivastigmine
- Galantamine

N-methyl-D-aspartate (NMDA) receptor antagonist

- Memantine

# Donepezil(S)

Evidence:

- double-blind placebo-controlled study of patients with mild to moderate AD showed improved cognitive scores but no effect on quality of life measures.
- Placebo-controlled trial of memory clinic patients with mild to moderate AD +/- CVD showed a small beneficial effect in cognitive score (0.8 on MMSE) but did not delay entry to institutional care and no evidence of disease modifying activity.
- Early-stage AD patients with mild impairment on activities of normal living showed a clinically modest improvement (2-3 points on the ADAS-cog).
- 10mg vs 23mg in patients with moderate to severe AD showed no significant differences in global functioning plus higher adverse effects in the higher dose group.

5 mg per day for 4 weeks, then increasing to 10 mg per day.
Disintegrating format available for those unable to swallow a pill.
May have some modest effect on BPSD symptoms.

Adverse effects:

- diarrhoea, nausea, and vomiting (20% percent of patients)
- bradycardia
- rhabdomyolysis
- GI bleeding

# Rivastigmine (SA)

Not compared head-to-head with donepezil, but efficacy appears similar

Side effect profile is related to cholinergic effects: nausea, vomiting, anorexia, and headaches.

Transdermal patch generally better tolerated.

# Galantamine (NS)

Randomised controlled trials in mild to moderate AD show slowed decline in both cognition and activities of daily living, sustained up to 36 months.

Adverse effects: nausea, vomiting, diarrhoea, anorexia, weight loss

Associated with increased mortality in patients with MCI

# Memantine (NS)

No benefit in MCO or mild AD; modest benefits in moderate to severe AD:

Evidence

- AD patients with MMSE 3 - 14 had significantly reduced deterioration on multiple scales of clinical efficacy plus high tolerability.
- In moderate to severe AD patients already taking donepezil showed better cognitive scores and ADL scores but no reduction or delay in accessing residential care

# Who to refer to secondary care

Symptoms suggesting alternate diagnoses

- early onset: Huntington's, HIV
- rapid or atypical presentation: prion disease
- neurological deficit: MND, parkinsonism

Onset of BPSD symptoms

Presence of complex co-morbidities

Disparity between corroborative history and basic cognitive screening

# Mr PN

67 year old retired civil servant, educated to primary degree level

PMH: mild COPD
musculoskeletal chest pain (negative mycocardial perfusion scan)
Medications: Salbutamol prn, Paracetamol prn

Attends GP in May 2017 accompanied by his wife
He reports no concerns; wife reports altered memory:

- losing things around the house
- forgetting familiar names
- concentration seems poor
- uncharacteristically agitated
- seeing things

Independently mobile, using stick for a few months after three falls related to loss of balance.

Independent with personal cares and most other activities of daily living, but slower.

Stopped driving after family expressed concern about reduced reaction time.

Uses public transport safely, One episode of phoning wife as could not remember where bus-stop located.

O/E: Right sided resting tremor<br>Paucity of facial movement<br>MOCA 21/30

GP refers to Geriatrician

| | |
|---|---|
| Additional hx: | Anosmia approximately 10 years |
| | REM sleep disorder |
| O/E: | Mild postural drop in BP |
| | Positive glabellar tap |
| | Mild rigidity in the right forearm. |
| | Festinant gait |
| | Mild postural instability. |

Impression: Lewy-Body dementia

Commenced on: Madopar 62.5mg tds for 1/12, then 125mg tds

Donepezil 5mg od for 1/12 then 10mg

Referred to joint CART / CMHT meeting for case discussion

- offered and accepted f/u with Case Manager and Supporting Families

Geriatrician reviewed at 2/12

- PN feels well; no AE with medications
- Wife reports he is more steady and “head seems clearer”
- Still hallucinating at times but not bothered by it
- Appreciative of available supports