Impact of Dementia on the Assessment and Management of other illnesses

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Personal Experience of Working with Older People

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Background

- The number of people living with dementia in the UK is estimated to be around 850,000 and set to increase, with figures anticipated to reach over one million by 2025

- The All Party Parliamentary group (APPG) report from 2016 suggested almost 7 in 10 people with dementia also have one or more other health condition.

Background

- Those diagnosed with dementia have significantly higher community-based primary care physician (general practitioner, GP) consultation rates when compared with those with no dementia.

- Dementia can complicate the management of comorbid conditions and comorbidities or their treatment can accelerate the progression of dementia.

- Identifying which groups have the greatest need for healthcare is essential to plan effective dementia care

Dementia and Co-morbidities

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While dementia is often viewed as an isolated condition, this patient group suffer from a high prevalence of comorbid medical conditions, with a number of conditions appearing to be ‘significantly associated’ with dementia

Scrutton & Brancati. Dementia and Comorbidities. Ensuring Parity of Care. 2016

Comorbidities

- A comorbidity is a secondary or additional disease or disorder that a person may have.

- People with dementia are often living with a number of comorbidities which are often undiagnosed, for example these might include conditions such as hypertension and diabetes.

Multimorbidity

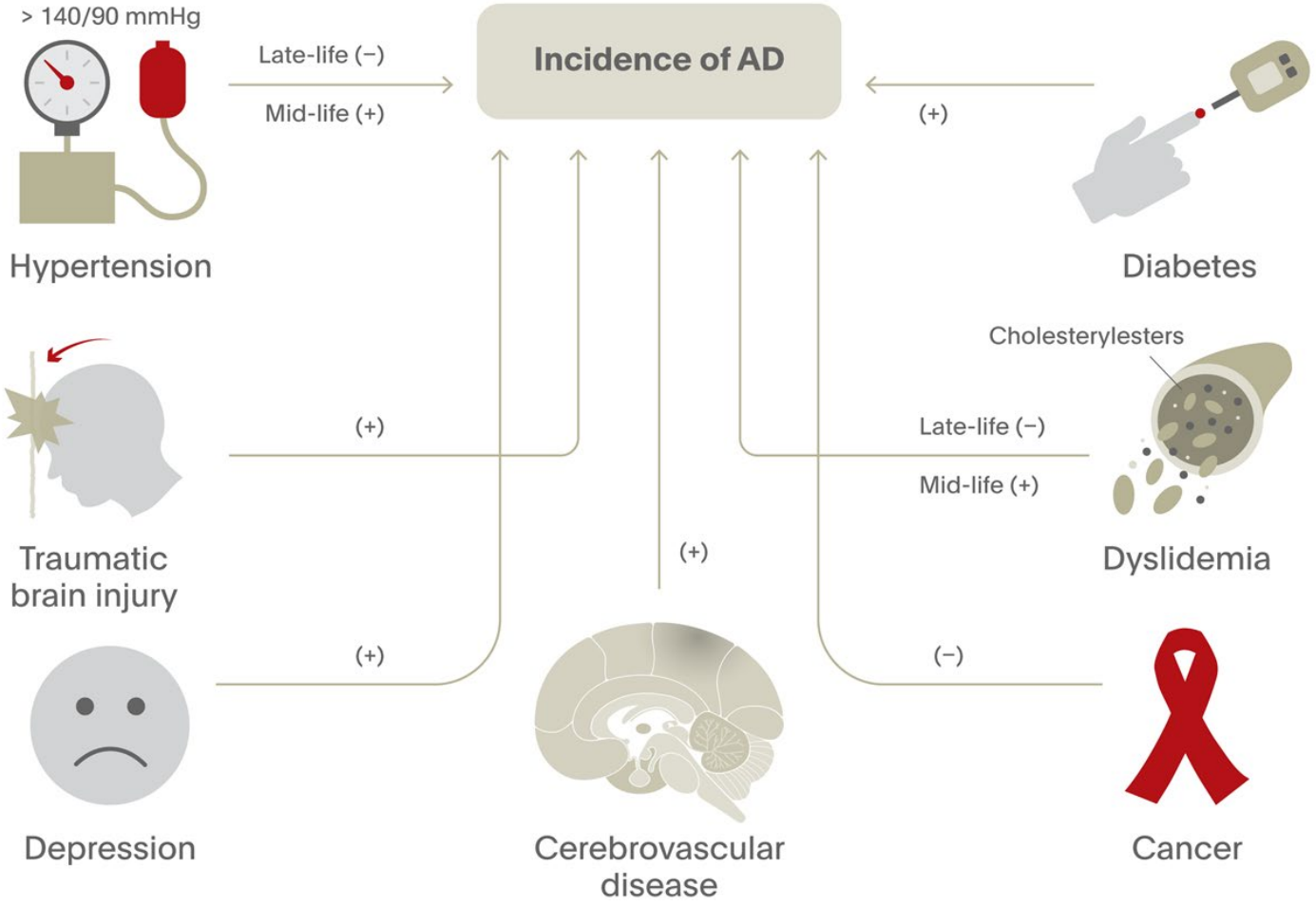
- Multimorbidity—the presence of two or more chronic health conditions—is highly prevalent in the population with dementia. It has been estimated that 95% of those with dementia have another chronic disease

- In the UK, a strong association has been observed between multimorbidity and both primary care consultations and unplanned hospitalisation in the general population, However, it is uncertain to what degree these findings can be extrapolated to the dementia population

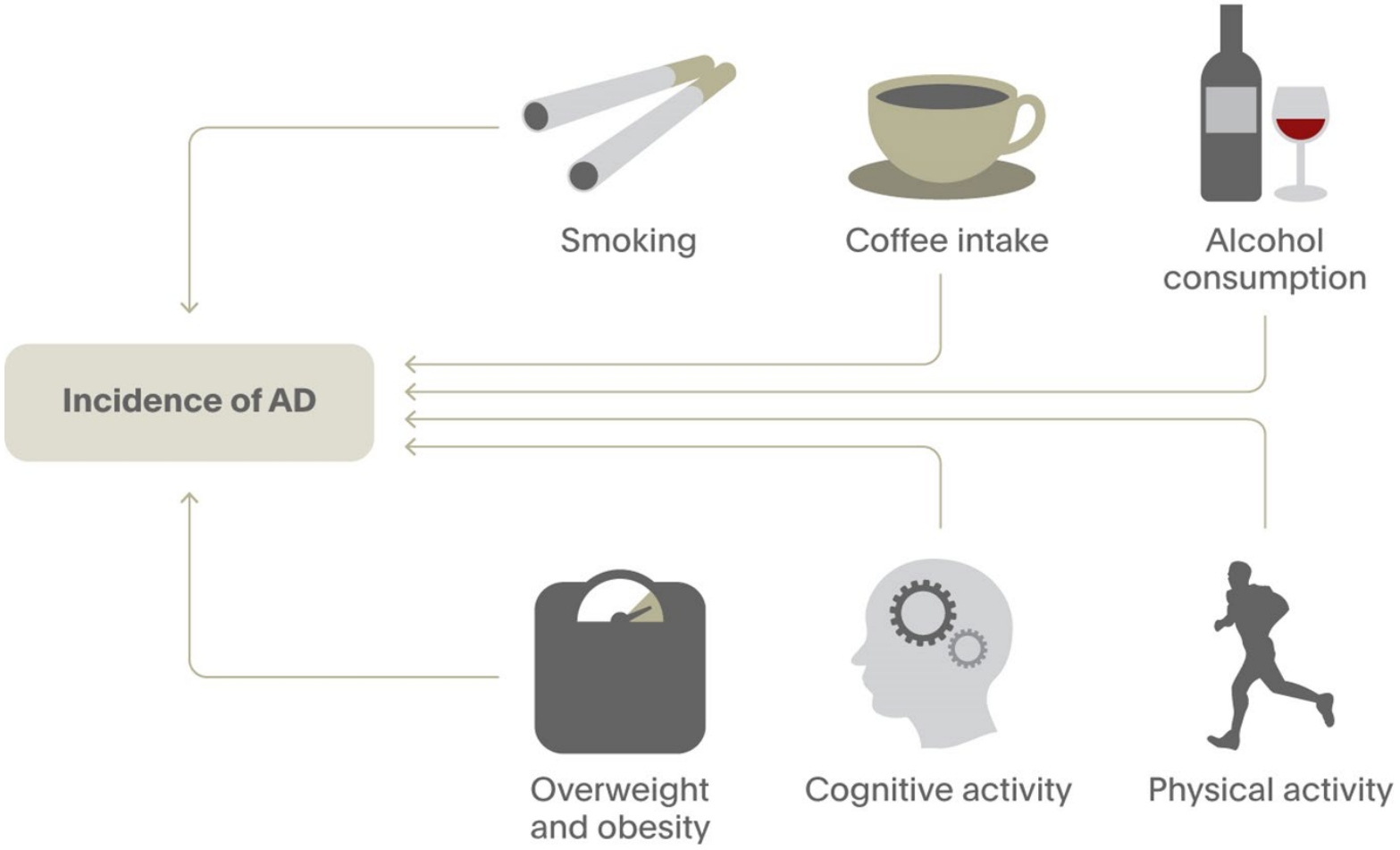
Dementia and Co-morbidities

- Many people with dementia have many other serious medical conditions
- Medications and treatments can worsen cognitive status and exacerbate other symptoms of dementia
- Likewise, dementia can complicate treatments of other medical conditions

Pre-existing medical conditions related to Alzheimer's disease



Modifiable lifestyle factors related to Alzheimer's disease



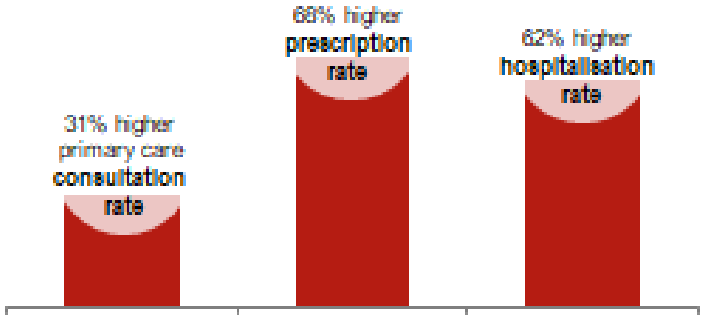
Financial Costs

Costs associated with the comorbidities of AD

- An American study found that treating the comorbidities of people with dementia generated $4,134 greater healthcare costs, in 2002 US dollars, compared with the costs of treating age-matched control cases[1]
- The increase in costs were attributed to higher usage of inpatient and skilled-nursing facilities[1]
- Better treatment and care of patients with AD could, therefore, reduce the costs of comorbid illness[1] and reduce the burden on society

The comorbidities of AD add to the costs of treating an already burdensome disease[1,2]

- A retrospective analysis of a UK health record database found a correlation between the number of comorbidities and healthcare resource use[2]
- Compared with patients with AD and 2–3 comorbidities, patients with ≥6 comorbidities:[2]



- This would translate to a cost difference of £5,100 per person over 3 years (based on UK 2013 costs)[2]

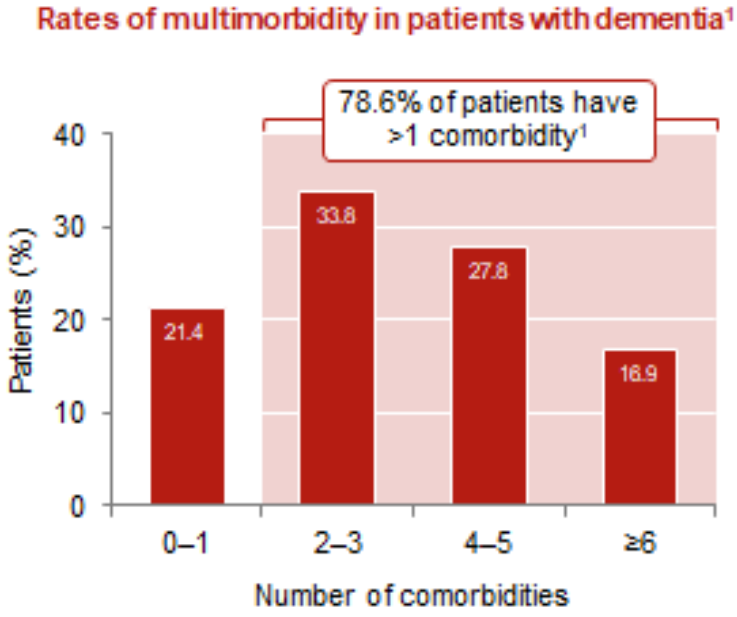
AD=Alzheimer's disease; UK=United Kingdom; US=United States

1. Hill et al. Neurology 2002;58(1):62–70; 2. Browne et al. BMJ Open 2017;7:e012546

Co-morbidities with dementia

Cumulative rates of comorbidities in patients with dementia

- A retrospective analysis of a UK health record database included 4,999 patients with dementia[1]
- The most frequent comorbidities in patients with dementia were:[1]
  - Cardiovascular-related conditions (13.4–53.4%)
  - Chronic pain (33.5%)
  - Depression (23.5%)
  - Hearing loss (22.3%)
  - Constipation (14.2%)
  - Diabetes (14.0%)
- The rates of multimorbidity – the presence of two or more chronic health conditions – was striking: 78.6% of patients with dementia suffered with >1 medical comorbidity[1]



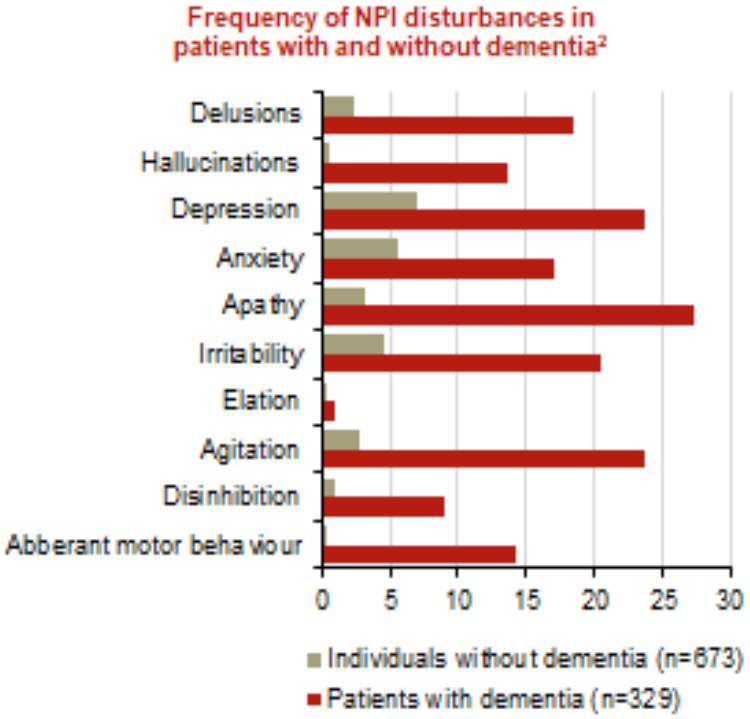
UK=United Kingdom

1. Browne et al. BMJ Open 2017;7:e012546

Psychiatric co-morbidities

The psychiatric comorbidities of dementia

- Although AD is considered to be a cognitive disorder, almost all patients develop neuropsychiatric symptoms as the disease progresses[1,2]
- Apathy, depression, and agitation are common neuropsychiatric disturbances observed in patients with dementia[2]
- The neuropsychiatric symptoms of dementia add to the burden of the disease – increasing morbidity and disability, and adding to the burden placed on caregivers[2]



AD=Alzheimer's disease; NPI=Neuropsychiatric Inventory

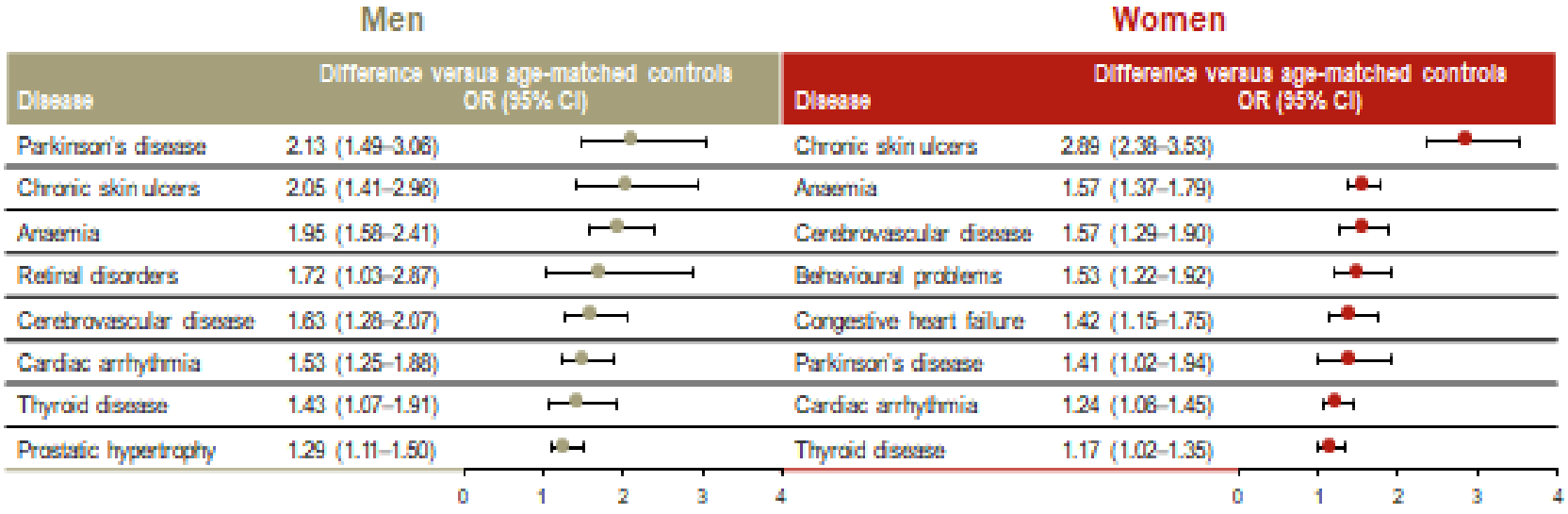
1. Lyketsos et al. Alz Dement 2011;7(5):532–539; 2. Lyketsos et al. Am J Psychiatry 2000;157:708–714

Lundbeck Institute Campus

Physical Comorbidities

The physical comorbidities of Alzheimer's disease

Odds of dementia-associated chronic comorbidities in men and women ≥65 years old[1]



Individuals with dementia have a significantly greater number of comorbidities than those without dementia[1]

CI=confidence interval; OR=odds ratio

1. Poblador-Plou et al. BMC Psychiatry 2014;14:84

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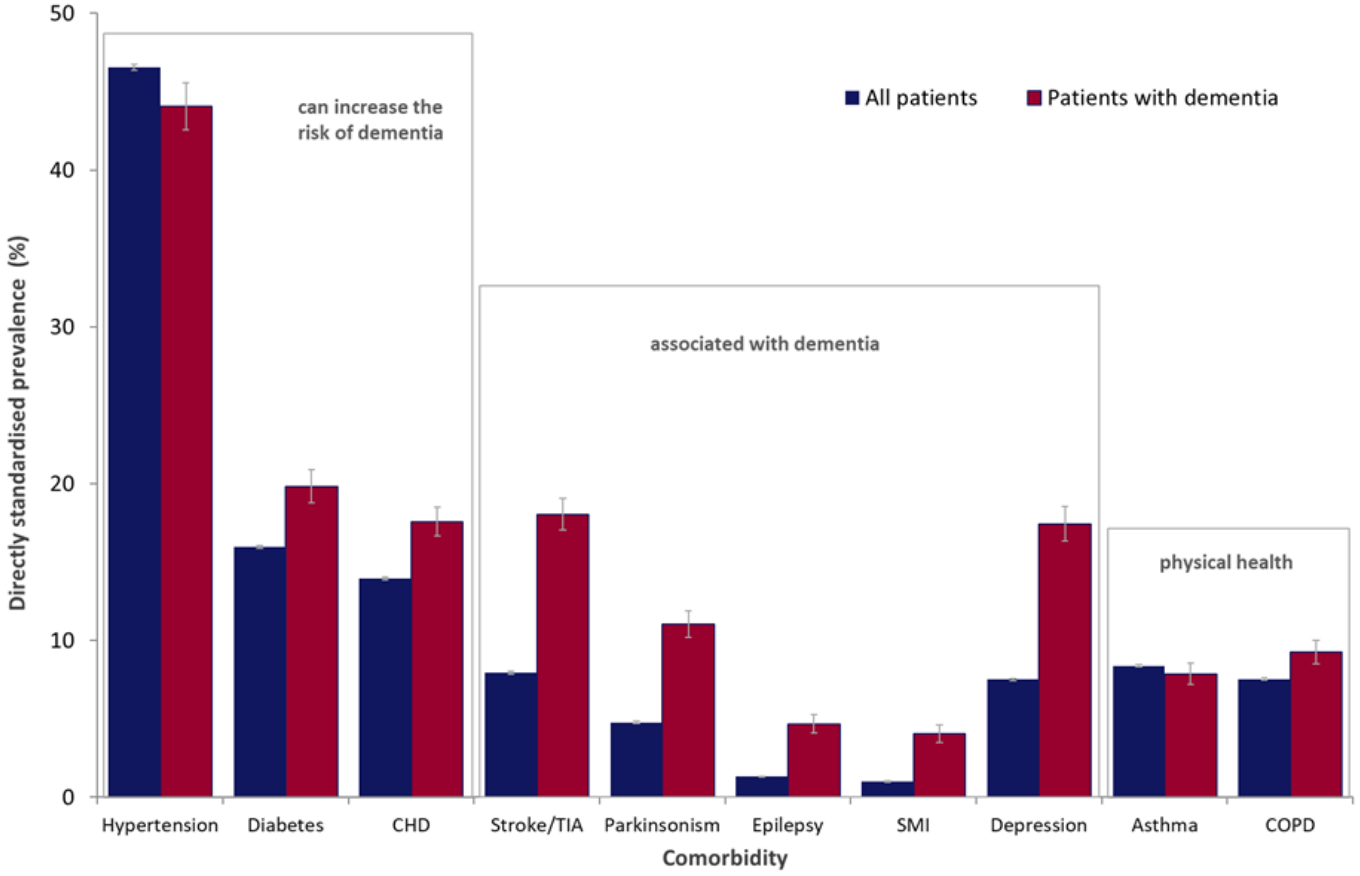
Co-morbities



Source: The PHE Neurology Dementia Intelligence team using The Health Improvement Network (THIN)

VaD vs ADs

Vascular disease and Alzheimer's disease

The shared risks of vascular disease and AD[1]

Genetic risks
- *APOE* gene (apolipoprotein E)
- *MTHFR* (methylenetetrahydrofolate reductase)

Medical risk factors
- Hyper/hypotension
- High cholesterol
- Diabetes

Lifestyle/behavioural/environmental risk factors
- Obesity
- Lack of exercise and poor physical fitness
- Smoking
- Major depressive disorder
- Fungal pathogens
- Exposure to air pollution

- The association between dementia and vascular disease risk has been investigated using data from the large-scale ARIC study[2]
- The study followed individuals over 20 years and tracked differences in brain amyloid deposition[2]
- It was found that a cumulative number of vascular risk factors[a] was associated with an increase in brain amyloid deposition[2]
- The results suggest that exposure to vascular risk factors also constitutes a risk for dementia[2]
- Whilst more research is needed, the case in favour of risk factor management and appropriate counselling to promote vascular brain health is now clear[3]

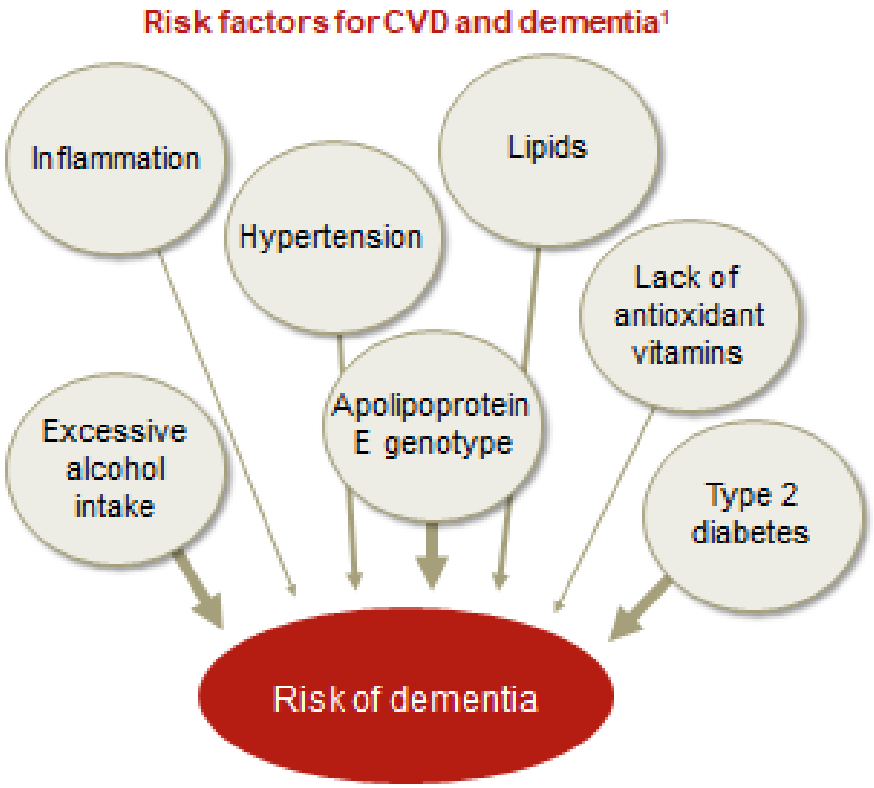
[a]Risk factors included body mass index ≥30, current smoking, hypertension, diabetes, and total cholesterol ≥200 mg/dl;
AD=Alzheimer's disease; ARIC=atherosclerosis risk in communities

1. Santos et al. Alzheimers Dement (Amst) 2017;7:69–87;
2. Gottesman et al. JAMA 2017;317(14):1443–1450; 3. Brellner & Galasko. Neurol Clin Pract 2015;5(3):190–192

CVD vs AD

Cardiovascular disease and Alzheimer's disease

- Many of the risk factors associated with CVD are thought to also increase the risk of cognitive decline in older people, and potentially the risk of AD[1]
- Because CVD risk increases with age, it has been suggested that the cognitive decline seen in patients with dementia leads to worsening self care, and a greater risk of CVD[2]
- In one study, patients with dementia were found to be at a greater risk of cerebrovascular disease (**OR: men, 1.63; women, 1.57**)[3]
- More research into the links between atherosclerotic and neurodegenerative disease may provide avenues for prevention and treatment in the future[3]



CVD=cardiovascular disease; OR=odds ratio

1. Stampfer. J Intern Med 2006;260(3):211–223;
2. Stewart. J Neurol Neurosurg Psychiatry 1998;65:143–147;
3. Poblador-Plou et al. BMC Psychiatry 2014;14:84

Diabetes and AD

Diabetes and Alzheimer's disease

- A meta-analysis of 19 studies has shown that diabetes increases the risk of developing AD, and the risk of mild cognitive impairment[1]
- Thus, AD and diabetes may share risk factors, including overlapping metabolic risk factors[1]
- However, it has been suggested that, whilst under-nutrition is a problem in patients with dementia, some patients may develop preferences for sweet foods, or snack foods, which heighten their risk of developing diabetes[2,3]

Given the progressive and life-long nature of diabetes and dementia, and the fact that the prevalence of both conditions is increasing, healthcare systems need to prepare for patients with comorbid AD and diabetes[2]

AD=Alzheimer's disease

1. Cheng et al. Intern Med J 2012;42(5):484–491;
2. Scrutton & Brancati. Dementia and comorbidities. Ensuring parity of care. 2016;
3. Ikeda et al. J Neurol Neurosurg Psychiatry 2002;73(4):371–376

Concerns arising from dementia and co-morbidities

- Impaired capacity
- Difficulties understanding implications of illness
- Failed appointments
- Reduced ability to follow treatment plans
- Under reporting of symptoms
- Reduced ability to self care – “often acopia”
- Carers put under increased strain

Concerns arising from dementia and co-morbidities

- Non compliance of treatment
- Consent
- To Treat or not to treat – what is going to be achieved
- Diagnosis – what is going to be achieved
- What treatment takes priority?

Non Compliance to care and Treatment

Assessment

- Pain
- Feeding
- Falls
- Depression
- Paranoia
- Dehydration
- Bowels

Management

- Language, tools, medication
- Dentures, thrush, taste, choice
- Neuropathy, shoes, nails, meds
- Isolation, pain, ?hypo-delirium
- Delirium, is it?, past experiences
- Sub cut?, beakers?, access, jellies
- Treat, review meds, diet

All can cause delirium if not addressed . Hypo my main concern as not always recognised.

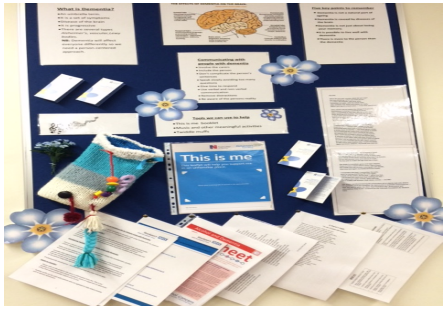
Treatment 1

- The importance of discussion and given all the facts
- Outcome should be about QOL rather than treatment and cure
- Overload of information
- Multi – discliplinary, not dementia specialists
- Discussions may require more time
- May need to review/stop treatment

Treatment 2

- LPA s
- Advanced Care Plans
- What is to be achieved from investigations/treatments
- Dementia often the blame for agitation or deterioration
- Use guidelines
- Listen and work with the relatives

What helps



- PCC Care – This is me
- Involving the families
- Take time to listen
- Look at the whole picture including social issues
- Should someone co-ordinate care
- Recognise we don't know everything
- New ways of working – appts, screens etc.
- Look at your language when communicating
- Some GPs are more interested in the elderly than others

Jackie

Mum

- Memory issues.
- Bowel issues
- Vascular issues
- Low Mood
- 12 stone weight loss
- Diabetes
- Hypertention/statins
- Family/financial issues

Who oversees? Whose responsibility?

- Patient
- Wife has cancer
- Her husband has developed memory issues since COVID
- Quick deterioration in memory and behaviour
- Weight loss/not eating
- Agitated
- Gp response – clearly has dementia, nothing we can do. Your thoughts???

Way Forward

Clinical guidelines and older patients with dementia

- There are many clinical guidelines for the management of AD and dementia[1]
- A meta-analysis aimed to investigate how many of the available guidelines address the comorbidity burden commonly observed in older patients with dementia[1]
- Out of the total of 22 clinical guidelines that were included for analysis:[1]
  - 20 (91%) addressed issues of treatment for older patients
  - 5 (23%) classified older patients by age
  - 13 (60%) addressed issues of comorbidity
  - 7 (32%) reported recommendations for patients with several comorbid conditions

The majority of current clinical guidelines on dementia do not adequately address the issues of comorbidities in older patients – new guidelines are needed that address this knowledge gap[1]

AD=Alzheimer's disease

1. Damiani et al. Clin Interv Aging 2014;9:1399–1407

Way Forward

Living with significant cognitive impairment and co-occurring complex co-morbidities (CC) is an important issue for public health in an aging society.

Little is known about how dementia and other significant cognitive impairment impacts morbidity, mortality, and other outcomes for people with multiple CCs.

Further study is needed to better understand how dementia and other significant cognitive impairment influences hospitalizations, disease-specific outcomes, diabetes, chronic pain, CVD, depression, falls, and stroke for people living with multiple CCs

Mark B. Snowden,1 Lesley E. Steinman,2 Lucinda L. Bryant et al (2017)

Thank you Listening

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