

Introduction

Syndrome of progressive multiple cognitive deficits and memory loss→behavioural/social issues.

Epidemiology

Prevalence: 0.1% 40-65y, 2% 65-70y, 5% 70-80y, 20% >80y. Alzheimer's ↑ in Caucasians & F.

Risk Factors

- Genetics in various dementias
- Apolipoprotein E4 variant (Chr19), Down syndrome (Chr 21-amyloid β gene) in Alzheimer's
- Vascular disease risk factors

Aetiology

Most common:

- Alzheimer's disease - 65-70% - amyloid β plaques & neurofibrillary tangles in cortex.
- Vascular dementia (incl. multi-infarcts, chronic SDH, vasculitis) - 15%
- Dementia with Lewy bodies (DLB) - 10%.- Affects brainstem or neo-cortex and characterized by fluctuating confusion, visual hallucinations, spontaneous Parkinsonism
- Frontotemporal dementia (Pick's disease) - 10% - behavioural changes, apathy, aphasia

Many other causes including:

- Primary: Familial (AD, rare, early onset) Alzheimer's disease, Parkinson's, Huntington's
- Infective: AIDS, CJD, syphilis
- Metabolic/Toxic: Porphyria, Wilson's, hypothyroidism, drugs, EtOH, B₁₂ def, pellagra (B₃)
- Traumatic: HI, boxers
- Neoplastic: meningiomas, metastases, lymphoma

Mixed pathology is common.

Presentation

Typically history of months/years of increasing forgetfulness, difficulty in ADLs. Personality changes such as apathy, aggression/agitation or delusions may have been noticed. Mini-mental state examination (MMSE) usually <24

Investigations

- R/O other diagnoses: MSU, FBC, ESR, U+E, LFT, Glucose, CMP, TFT, B₁₂ and folate (red cell folate), MBA 20, consider blood cultures, CXR and syphilis serology.
- LP if CJD suspected. HIV testing is suspected.
- CT head scan - ventricular enlargement & cortical atrophy esp temporal lobes
- MRI - degree of hippocampal atrophy can suggest Alzheimer's
- PET - may differentiate normal/Alzheimer's/frontotemporal dementia.
- Genetic analysis should only be requested where an inherited cause is suspected.

Management

- Multidisciplinary care (psychogeriatrician, SW, OT, community nurse) and carer support.
- Treat any underlying cause.
- Acetylcholinesterase inhibitors for moderate (usually MMSE 10-20) Alzheimer's & sometimes DLB: **donepezil** 5mg od for 4-6wks then 10mg od. May delay deterioration & improve some symptoms in short-term. Cholinergic **SE**. Also **galantamine** & **rivastigmine**. **Vitamin E** 1000IU bd may have similar effect.
- **Ginkgo biloba** - may have some effect after taking for at least 1 year.
- **Resperidone** & **olanzepine** may be used for hallucinations.