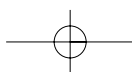
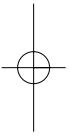
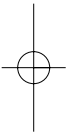
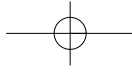


# DEMENTIA





## 6.1 DEMENTIA

### IDENTIFICATION

Epidemiology: >65 years 5%, >80 years 20%.

### REFERRED

Carer, liaison, forensic, General Practitioner, community health centre, self.

### ISSUES

Diagnosis, management, carers supports, insight, difficulty, history of behaviour and memory loss, issues pertinent to stage in life cycle, issues pertinent to stage of dementia.

### PRESENTING COMPLAINT

Memory loss, behaviour problems, personality, decrease in functioning

Use mnemonic *MAJOR PD*

**M**emory loss – decreased short term and long term memory

**A**bstract thought decreased, **A**phasia, **A**praxia, **A**gnosia – four As

**J**udgement decreased

**O**rganicity presumed

**R**ule out depression and

**P**ersonality disorder

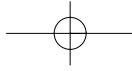
**D**ecline in functioning at work and relationships

No neurological signs – degenerative disorder, e.g. Alzheimer's disease

Neurological signs – vascular dementia?

### RELEVANT NEGATIVES

Exclude cerebrovascular accident, transient ischaemic attacks, increased blood pressure, alcohol, psychosis, depression, delirium, drug effects (3Ds – Depression, Delirium, Drugs)



## **ASSESSMENT**

- Onset – sudden or gradual?
- NB sudden may be unmasked by death of partner
- Progression – stepwise, abrupt or progressive – depending on cause
- Current difficulties

## **CONSEQUENCES**

- Affect – depressed symptoms, labile, angry, irritable
- Behaviour – disinhibited, aggressive, at risk of abuse
- Problems – relationships at work, social, forensic, navigational
- Severity – current level of functioning – enquire in detail, self care activities, continence
- Find appropriate level of impairment
- Abstract, complex tasks
- Activities of daily living: basic, instrumental, complex

## **FAMILY HISTORY**

Dementia, senility, CVA, multiple sclerosis, psychiatric disorder, depression, drug and alcohol, deliberate self-harm, movement disorders, Huntington's disease, Downs, apolipoprotein E

## **PERSONAL HISTORY**

Usually brief. Ask about exposure to heavy metals, occupation, head injuries, boxing, sexually transmitted diseases.

## **PAST PSYCHIATRIC HISTORY**

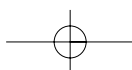
Previous admissions, depressive episodes, deliberate self harm.

## **PAST MEDICAL HISTORY**

- Vascular risk – smoke, increased blood pressure, myocardial infarction, atrial fibrillation
- Parkinson's disease, head injury, Downs, iatrogenic, thyroid, gastrectomy (low B<sub>12</sub>), hypoglycaemia

## **DRUG AND ALCOHOL HISTORY**

Alcohol and possible use of benzodiazepines and anticonvulsants.



## PREMORBID PERSONALITY

Coarsening, exaggeration or flattening of traits.

## MENTAL STATE EXAMINATION

- Appearance and behaviour – attitude
- Level of activity, apathy, agitation
- Posturing, stereotypies, mannerisms
- Talk, poverty of content, perseveration
- Affect, mood, denial, neglect, psychotic, cognitions consistent with depression, delirium
- Catastrophic reaction
- Failure of new learning

Use mnemonic *CALM FACE*

**C**onsciousness – alert, lethargic, stupor, coma, drowsy

**A**ttention – digits, serial 7s, WORLD

**L**anguage – speech naming, repetition, comprehension, reading and writing

**M**emory – short-term memory, orientation, remote, personal

**F**rontal lobe tests – alternate hand movements, frontal release signs (palmomental, grasp, snout)

**A**praxia, agnosia, astereognosis, aphasia

**C**onstruction – figures

**E**xecutive functions – general knowledge, abstract, proverbs

## ON EXAMINATION

- Cardiovascular system, retina, carotid bruit, blood pressure
- Movement – Huntington's, Pick's (primitive reflexes), Parkinson's (tremor, rigidity, akinesia)
- Thyroid – myxoedema
- Central nervous system – frontal lobe release signs, parietal, upper motor neurone, extrapyramidal side effects
- Primitive reflexes – snout, pout, grasp, glabella, palmomental
- Liver/alcohol stigmata
- Calcium ring
- B<sub>12</sub> – SACD
- Steele–Richardson syndrome – impaired upward gaze

**DIFFERENTIAL DIAGNOSIS**

- Pseudodementia (depression, dementia + depression, schizophrenia, anxiety, mania)
- Benign senescent forgetfulness, AAMI age-associated memory impairment
- Delirium – can be demented and delirious
- Amnesic disorder, frontal lobe syndrome, parietal lobe syndrome (Gerstmann)
- Dementia due to general medical condition
- Substance intoxication, withdrawal – causing multiple cognitive deficits
- Mental retardation
- Malingering, factitious

**ISSUES****Safety**

- Admit only for complications and occasionally for diagnostic clarification.
- Consider deliberate self harm, comorbid depression.

**Clarify diagnosis**

- Observations and disability  
Inpatient observation – look for depression, diurnal mood variation (typically, am: worse depression, pm: worse dementia), interaction with other patients, activities of daily living  
Look at patients behavioural ability to perform tasks to look after self and person
- Exclude differential diagnosis
- Exclude reversible causes

**ASSESSMENT OF MEMORY LOSS IN THE ELDERLY****Memory loss**

Benign age-associated.

**Pathological memory loss**

Functional, depression, mania, anxiety, schizophrenia, hysteria, malingering.

**Organic**

Acute ?cause delirium, dementia.

**Chronic**

- Focal
- Dymnestic syndrome
- Frontal lobe syndrome
- Parietal lobe syndrome
- Dysphasia

**Cause of dementia**

## Potentially reversible

- Thyroid ↓ (or ↑)
- Calcium ↓ (or ↑)
- Folate ↓
- B<sub>12</sub> ↓
- Tumour – intracranial
- Space-occupying lesion
- Normal pressure hydrocephalus
- Syphilis, AIDS

## Irreversible

*Cortical*

- Degenerative
- Alzheimer's
- Frontotemporal including Picks
- Diffuse Lewy Body disease

*Subcortical*

- Degenerative
- Vascular dementia
- Parkinson's disease
- Steele–Richardson syndrome

*Other*

- Alcohol
- Head injury

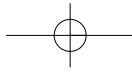
**Nature of deficits**

- Language
- Praxis
- Personality

**Other pathology**

- Sensory
- Physical
- Psychiatric

**Patient's assets****Effects on family**



### SPECIAL INVESTIGATIONS

To exclude ... I would do ...

Mandatory, FBC, B<sub>12</sub>, folate, ESR, UE, CA, LFT, TFT, CT (without contrast).

If indicated: glucose, ANF, VDRL, HIV, ECG, EEG, toxicology.

Specialist centres.

MRI SPECT.

Neuropsychological assessment.

### CT

- May show cerebral atrophy, focal brain lesions, hydrocephalus
- Help in aetiology of movement disorders, frontal lobe atrophy in Pick's
- Does not give Alzheimer's diagnosis but excludes other causes

### EEG

- Slow frontal wave pattern and cortical atrophy on CT in Alzheimer's
- Lesions in the white matter on CT and periventricular white matter hyperintensities with MRI in vascular dementias
- Enlarged ventricles but normal sulci with normal pressure hydrocephalus
- Subcortical degeneration in Parkinson's disease, Huntington's disease
- Collateral history from other sources to verify and provide additional information, e.g. family, other notes, doctors
- Role of other professionals – to do what?  
Domicillary assessment, occupational therapist, physiotherapist, activities of daily living, social work, family therapy, speech therapy
- Care giver support – respite, home helps

**Establish therapeutic alliance** (if possible)

**Decrease symptoms using a biopsychosocial model**

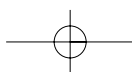
### SHORT-TERM MANAGEMENT

Aim to keep at home:

#### Biological

Treat reversible causes, e.g. comorbid depression with:

- SSRI's, SNRI, MAOIs/RIMA, TCA with least anticholinergic side effects, e.g. nortriptyline/desipramine
- Low dose of medication in elderly
- Treat psychiatric symptoms of dementia – antipsychotics





- Consider side effects – use new antipsychotics, e.g. risperidone
- High potency antipsychotics, e.g. haloperidol 0.5–5 mg daily, side effects akathisia and pseudoparkinsonism
- Low potency antipsychotics, e.g. thioridazine 25 mg nocte, side effects: postural hypotension and sedation
- Treatment of dementia with tacrine (TCA) – side effects: nausea, vomiting, diarrhoea, blood dyscrasias. Monitor LFTs and FBC
- Acetylcholinesterase inhibitors – donepezil, rivastigmine, metrifonate

### **Psychological**

Break news, counselling, offer hope, memory aids, support carer, psychoeducation, behavioural strategies.

### **Social**

Occupational therapy, meals on wheels, domiciliary, day centre, mobilise support, carers, financial counselling, enduring power of attorney, wills, general practitioner, social services, work, driving.

## **MEDIUM-TERM TREATMENT**

### **Biological**

Review comorbidity, treatment of behavioural symptoms, psychosis/depression.

### **Psychological**

Ongoing support, carer, remotivation, reminiscence, reality orientation, reinforcement, validation.

### **Social**

Respite day care, behavioural modification.

## **LATE MANAGEMENT**

- Nursing home placement, grief issues, memory loss, cognitive techniques
- Self help Alzheimer's Association

**DIAGNOSTIC CRITERIA FOR DEMENTIA OF THE ALZHEIMER'S TYPE** Modified withpermission from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Copyright 1994 American Psychiatric Association.**A.** The development of multiple cognitive deficits manifested by both

1. Memory impairment (impaired ability to learn new information or to recall previously learned information).
2. One (or more) of the following cognitive disturbances:

- Aphasia (language disturbance)
- Apraxia (impaired ability to carry out motor activities despite intact motor function)
- Agnosia (failure to recognise or identify objects despite intact sensory function)
- Disturbance in executive functioning (i.e. planning, organizing, sequencing, abstracting)

**B.** The cognitive deficits in (A1) and (A2) cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning.

**C.** The course is characterized by gradual onset and continuing cognitive decline.

**D.** The cognitive deficits in (A1) and (A2) are not due to any of the following:

1. Other central nervous conditions that cause progressive deficits in memory and cognition (e.g. cardiovascular disease, Parkinson's disease, Huntington's disease, subdural haematoma, normal pressure hydrocephalus, brain tumour).
2. Systemic conditions that are known to cause dementia (e.g. hypothyroidism, vitamin B<sub>12</sub> or folic acid deficiency, niacin deficiency, hypercalcaemia, neurosyphilis, HIV infection).
3. Substance-induced conditions.

**E.** The deficits do not occur exclusively during the course of a delirium.

**F.** The disturbance is not better accounted for by another axis 1 disorder, e.g. major depressive disorder, schizophrenia.

Early onset <65years

Late onset >65 years

Specify if:

With Delirium

With Delusions

With Depressed Mood

Uncomplicated

With Behavioural Disturbance

**AETIOLOGY OF DEMENTIA****DEGENERATIVE**

Alzheimer's, Pick's, Huntington's, Creutzfeldt-Jakob, Parkinson's, multiple sclerosis, Wilson's, progressive supranuclear palsy, progressive multifocal leucoencephalopathy.

### **VASCULAR**

Multi-infarct dementia, subarachnoid haemorrhage, ischaemic encephalopathy (Binswanger's disease).

### **TOXIC**

Alcoholic dementia, dialysis, metal toxicity, aluminium, poisons, drugs, e.g. psychotropic drugs and anticholinergic, methyldopa, clonidine, propranolol, anticonvulsants, cimetidine and amantidine.

### **ANOXIC**

Cardiac, respiratory, anaemia, post anaesthesia, carbon monoxide poisoning, post-cardiac arrest.

### **INFLAMMATORY**

Encephalopathies, cranial arteritis, SLE, neurosyphilis, encephalitis.

### **SPACE-OCCUPYING LESION**

Tumour, abscess, haematoma.

### **METABOLIC**

Hepatic, renal.

### **ENDOCRINE**

Myxoedema, hypopituitarism, Addison's, hypo- and hyperparathyroid.

### **VITAMIN**

B<sub>1,6,12</sub> folate.

### **NORMAL PRESSURE HYDROCEPHALUS**

Ataxia, incontinence, dementia.

### **TRAUMA**

Head injury, punch drunk, child abuse.

**EPILEPSY****DISTANT NEOPLASIA****HIV****PREVENTION**

No drug has been proven to prevent Alzheimer's disease. However, long-term use of anti-inflammatory drugs and oestrogen replacement therapy in post-menopausal women may have a protective effect. Those at risk of developing Alzheimer's disease (strong family history) should weigh up the risks and benefits of drug treatment.

**PROGNOSIS**

- Alzheimer's – gradual decline over 8–10 years, progressive disease
- Vascular dementia – onset is sudden, greater preservation of personality, course is step-wise and patchy although some patients have clinical course similar to Alzheimer's
- 90% of Alzheimer's will have psychiatric or behavioural complications during the course of the dementia
- 30% delusions, paranoid ideation, 16% hallucinations, 30% misidentifications syndromes, 5–20% major depressive episode, 20% physical aggression, 20% wandering
- **NB** when diagnose dementia there is a second patient, the family carer. The burden of caring for the patient with dementia is immense. This can be manifest physically, financially, social isolation or psychological distress eg depression, somatic or anxiety symptoms

**DISTINGUISH BETWEEN DEMENTIA AND PSUEDODEMENTIA****PSUEDODEMENTIA**

- Family aware of history, dysfunction, severity
- Aware of onset of severity
- Date onset with relative precision
- Rapid progression of symptoms and then plateau
- Previous psychiatric dysfunction common
- Cognitive loss complained of
- Detailed complaints of cognitive dysfunction
- Disability emphasised
- Highlight failures
- Communicate sense of distress
- Affective change pervasive
- Loss of social skills
- Behaviour incongruent with severity of cognitive dysfunction
- Answer 'don't know'
- Memory loss, gaps
- Variable performance on tasks

## DEMENTIA

- Family often unaware of dysfunction and severity
- Onset known only in broad limits
- Symptoms of long duration
- Symptoms of long course
- Cognitive loss rarely complained of
- Conceal disability
- Delight in accomplishments
- Struggle to perform tasks
- Rely on notes and calendars
- Unconcerned, labile, shallow affect
- Social skills retained
- Attention and concentration faulty, near miss answers frequent
- Memory loss for recent events more severe than remote
- Consistent poor performance on tasks

## SIGNS OF CORTICAL DEMENTIA

- Aphasia
- Apraxia
- Agnosia
- Amnesia
- Acalculia

## SIGNS OF SUBCORTICAL DEMENTIA

- Slow thinking
- Attention decreased
- Arousal decreased
- Concentration decreased, forgetful, decreased ability to manipulate knowledge
- Motor signs, gait, weakness, incoordination, tremor, reflexes increase, primitive reflexes, posture bowed and extended, gait, tremor, weakness
- Personality change
- Language and parietal lobe function spared

## EXTENDED COGNITIVE EXAMINATION

- Attention, concentration (digit span, serial sevens, world backwards), orientation (name day of week, month, year, location)
- Cognitive skills
- Memory
- Reasoning and problem solving

## FRONTAL LOBE SIGNS

- Apathy
- Euphoria

SYNTHESIS OF PSYCHIATRIC CASES

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- Irritability
- Social inappropriateness
- Lack spontaneity
- Decrease mental and physical activity
- Intellectual impairment
- Poor concentration
- Inability to carry out plans
- Attention deficit
- Sequencing – decreased, slow mental processing
- Executive role, personality, planning, abstraction
- Behavioural control, appropriate
- Disinhibited and euphoric – basal orbital lesion
- Apathy, decreased drive, improved planning – dorsal lateral convexities

**FRONTAL LOBE TESTS**

- Generativity – test with verbal fluency (<13 'c' words in 90 seconds abnormal), write a sentence
- Abstract, proverbs
- Shift sets – pattern reproduction, alternating sequences e.g. fist/palm/side
- Judgement – social setting
- Wisconsin card sort test, trail making tests, frontal release signs, primitive reflexes
- Planning, draw a house, clock
- Primitive reflexes

**TEMPORAL LOBE**

- Naming objects, e.g. key, – dominant temporal lobe
- Word finding, reading
- Conversation during interview – receptive language – dominant temporal lobe
- Repetition of words, apple, table, penny – immediate recall – temporal lobes and frontal lobes
- Recall of words – recent memory, name and address, Babcock sentence – hippocampus, thalamus, fornix, mamillothalamic tract
- Long term memory – history, four presidents, last war

**DOMINANT PARIETAL LOBE**

Gerstmann's syndrome:

- Finger agnosia
- Dyscalculia – simple sums
- Dysgraphia – dictate a sentence and ask patient to write it down
- Right/left disorientation
- Ideomotor apraxia – blow out match, comb hair, simple tasks
- Ideational apraxia – mime putting stamps on letters etc

## NON DOMINANT PARIETAL LOBE

Construction apraxia – copy outline of objects.

Dressing apraxia

## OCCIPITAL LOBES

- Visual perception defect – cannot name object when camouflaged
- Useful tests – Luria Nebraska, Halstead Reitan, Trail Making test, Bender Gestalt, WAIS R, Wisconsin Card Sorting Test, Ravens Matrices

## PERSEVERATION

Occurs in:

- Prefrontal cortex
- Head injury
- Cerebrovascular accident
- Tumours
- Dementias
- Schizophrenia – catatonic

## ACTIVITIES OF DAILY LIVING

### Basic:

- Bath
- Dress
- Toilet, continence
- Transfer

### Instrumental:

- Telephone
- Finances
- Medication management
- Shopping
- Laundry
- Cooking
- Housework

### Complex:

- Self direction
- Interpersonal relationships
- Social transactions
- Learning
- Recreation