Delirium and dementia

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Curriculum coverage

1. Acute confusional state – Delirium

2. Chronic cognitive impairment/ dementia

3. Communicating with and managing a disturbed or challenging patient

Acute confusional state: delirium

Delirium etymology

- De = from, away from, out of
- Lira = the earth thrown up between two furrows; a ridge, track, furrow

Delirium introduction

- Very common: 20-30% of people on medical wards; 10-50% of people who have had surgery
- Costs £13k per admission
- Costs £23 billion/year
- Distressing for patients, families, (and staff)
- Poor prognosis (death/institutionalisation/functional-cognitive decline/ longer stay/ medical complications)
- Yet…under-researched, under-recognised, under-recorded, and poorly understood

Delirium: diagnostic criteria

- Core features (DSM-V):
  - **Disturbance in attention** (ie, reduced ability to direct, focus, sustain and shift attention) **and awareness**
  - The disturbance **develops over a short period** (usually hours to days) and tends to **fluctuate** during the course of the day.
  - **Change in cognition** (eg, memory deficit, disorientation, language disturbance, perceptual disturbance) that is not better accounted for by a pre-existing, established or evolving dementia.
  - There is evidence that the disturbance is caused by **a direct physiological consequence of a general medical condition,** an intoxicating substance, medication use or withdrawal, or more than one cause.

Delirium: symptoms

- In addition to the core diagnostic criteria, a wide range of other neuro-psychiatric symptoms can occur:
  - Illusions and hallucinations, esp if sensory impairment
  - Paranoia and delusions (usually transient)
  - Withdrawal, depressed mood
  - Anxiety, agitation
  - Dysphasia and dysarthria
  - Asterixis (hepatic encephalopathy and uraemia)
  - Motor abnormalities
  - Sleep disturbance

Delirium: subtypes

- Three subtypes:
  - Hyperactive: easy to spot. Restless, anxious, agitated, may be combative. Falls risk.
  - Hypoactive: withdrawn, poor oral intake, reduced speech, sleepy, may appear depressed. More difficult to spot. Tend to be sicker. Longer LOS.
  - Mixed (hyper- and hypo- active): the most common
  - A minority have no psychomotor disturbance

Delirium: causes

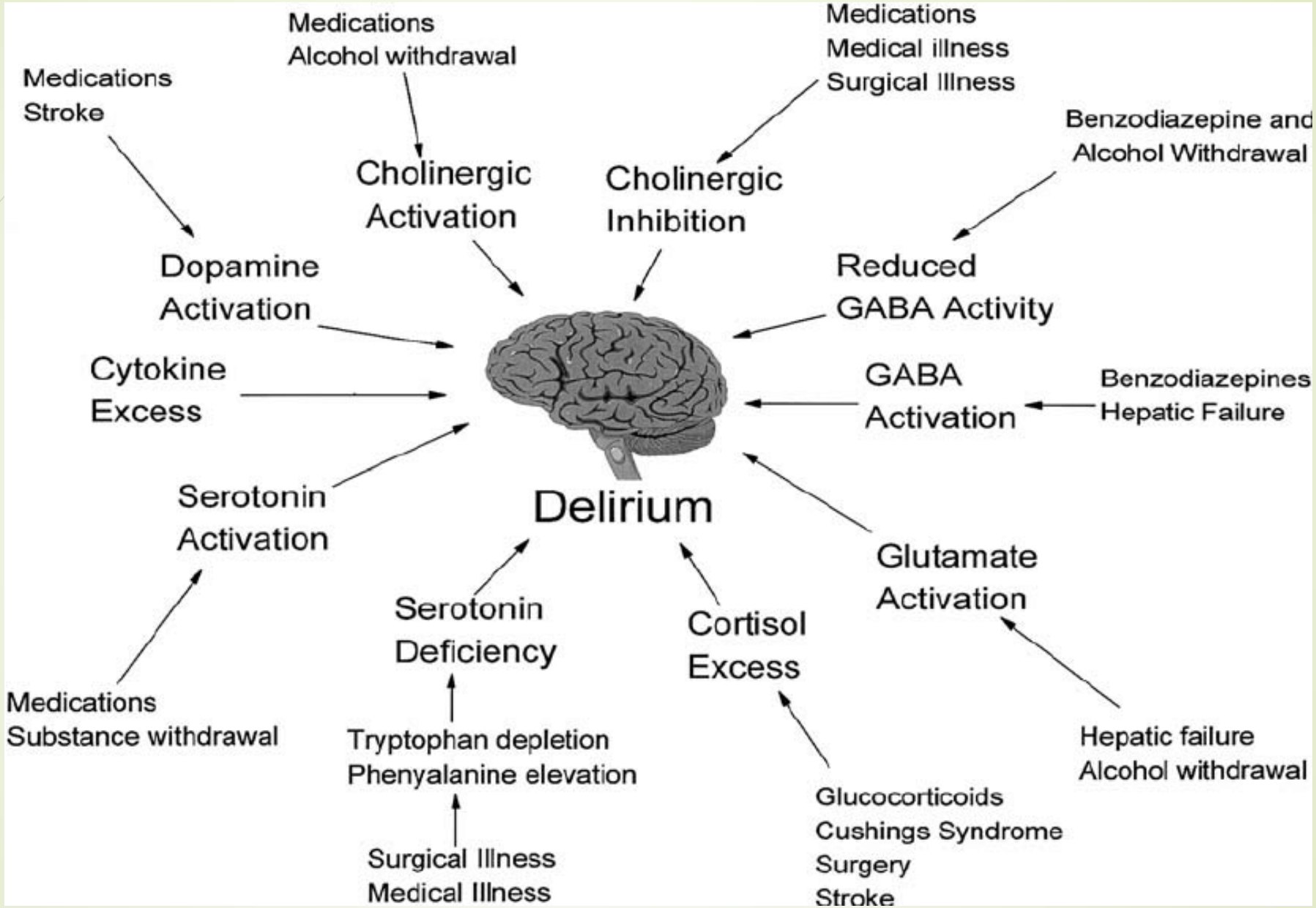
- Causes
  - Precipitant vs predisposing factors
  - A fit young person needs a greater physiological insult to become delirious than frail elderly
  - A wide range of possible causes in susceptible individual
  - Often multi-factorial in the elderly

Delirium: predisposing factors

- Pre-existing cognitive impairment
- Previous delirium
- Functional impairment
- Sensory impairment
- Comorbidity and severity of illness
- Depression
- History of stroke/TIA
- Older age

Delirium: precipitating factors

- Polypharmacy, esp psychoactive, sedative-hypnotics, opiates
- Bladder catheter (3-fold increase risk)
- Metabolic, eg uraemia, hyponatraemia, hyper/hypo-glycaemia, acidosis, hypercalcaemia
- Hypoxaemia
- Infections
- Surgery
- Trauma, esp hip fracture
- Constipation and urinary retention
- Pain


Medications
Alcohol withdrawal
Medications
Medical illness
Surgical Illness
Medications
Stroke
Benzodiazepine and
Alcohol Withdrawal
Cholinergic
Activation
Cholinergic
Inhibition
Dopamine
Activation
Reduced
GABA Activity
Cytokine
Excess
GABA
Activation
Benzodiazepines
Hepatic Failure
Serotonin
Activation
Delirium
Glutamate
Activation
Serotonin
Deficiency
Cortisol
Excess
Medications
Substance withdrawal
Tryptophan depletion
Phenyalanine elevation
Hepatic failure
Alcohol withdrawal
Surgical Illness
Medical Illness
Glucocorticoids
Cushings Syndrome
Surgery
Stroke

Delirium: NICE publications

- CG103: Delirium: Diagnosis, prevention and management. July 2010
- QS63: Delirium Quality Statements

NICE Quality Statement 1

- Statement 1. Adults newly admitted to hospital or long-term care who are at risk of delirium are assessed for recent changes in behaviour, including cognition, perception, physical function and social behaviour
  - (risk factors: age 65 or older, pre-existing cognitive impairment; broken hip or are seriously ill)

NICE Quality Statement 2

- Statement 2. Adults newly admitted to hospital or long-term care who are at risk of delirium receive a range of tailored interventions to prevent delirium

  - ("Interventions could include: avoiding moving people within and between wards…appropriate lighting and signage for example a 24 hour clock and calendar…reorienting the person…introducing cognitively stimulating activities…encourage regular visits from family and friends…ensure adequate fluid intake…avoid unnecessary catheterisation…encourage the person to walk….review pain management…medication review…ensure hearing and visual aids are working…avoid interventions during sleep periods…)

NICE Quality Statement 3

- Statement 3. Adults with delirium in hospital or long-term care who are distressed or are a risk to themselves or others are not prescribed antipsychotic medication unless de-escalation techniques are ineffective or inappropriate.
  - (Note that if needed low dose haloperidol or olanzapine are recommended; avoid in DLB/PDD)

NICE Quality Statement 4

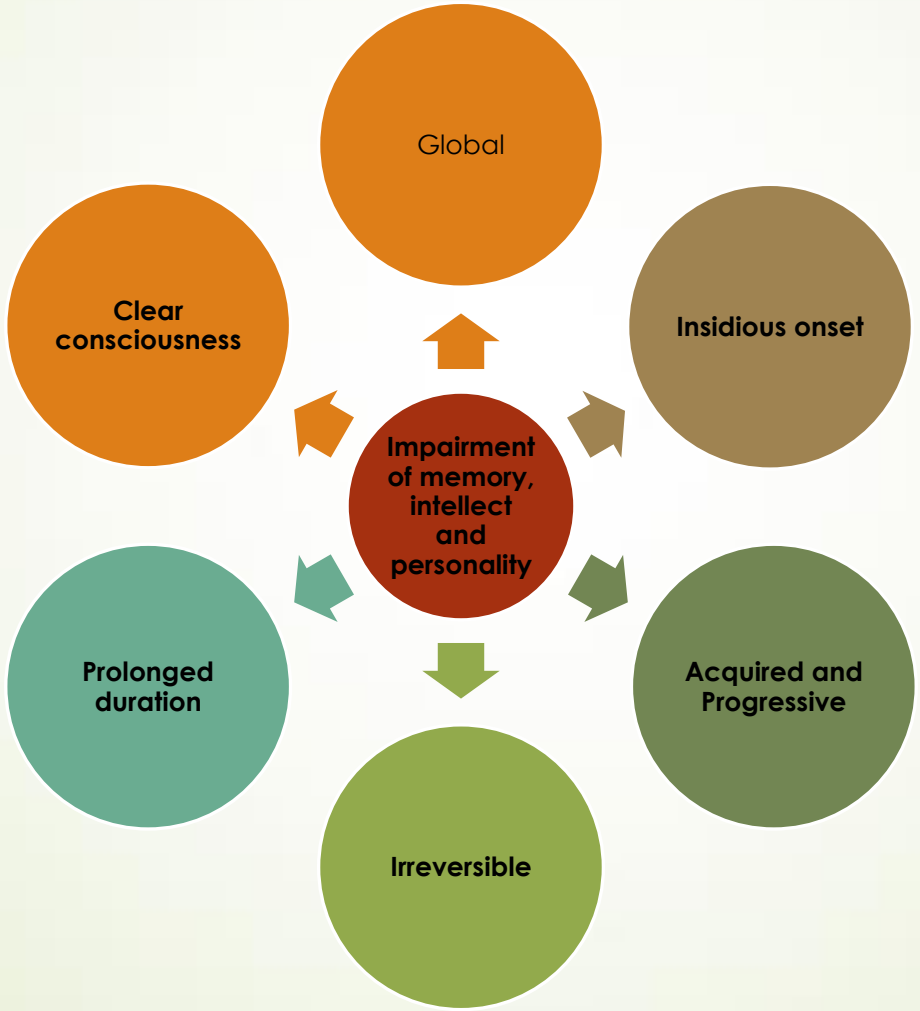
- Statement 4. Adults with delirium in hospital or long-term care and their family members and carers are given information that explains the condition and describes other people's experiences of delirium

NICE Quality Statement 5

- Statement 5. Adults with current or resolved delirium who are discharged from hospital have their diagnosis of delirium communicated to their GP.

2. Chronic cognitive impairment, dementia

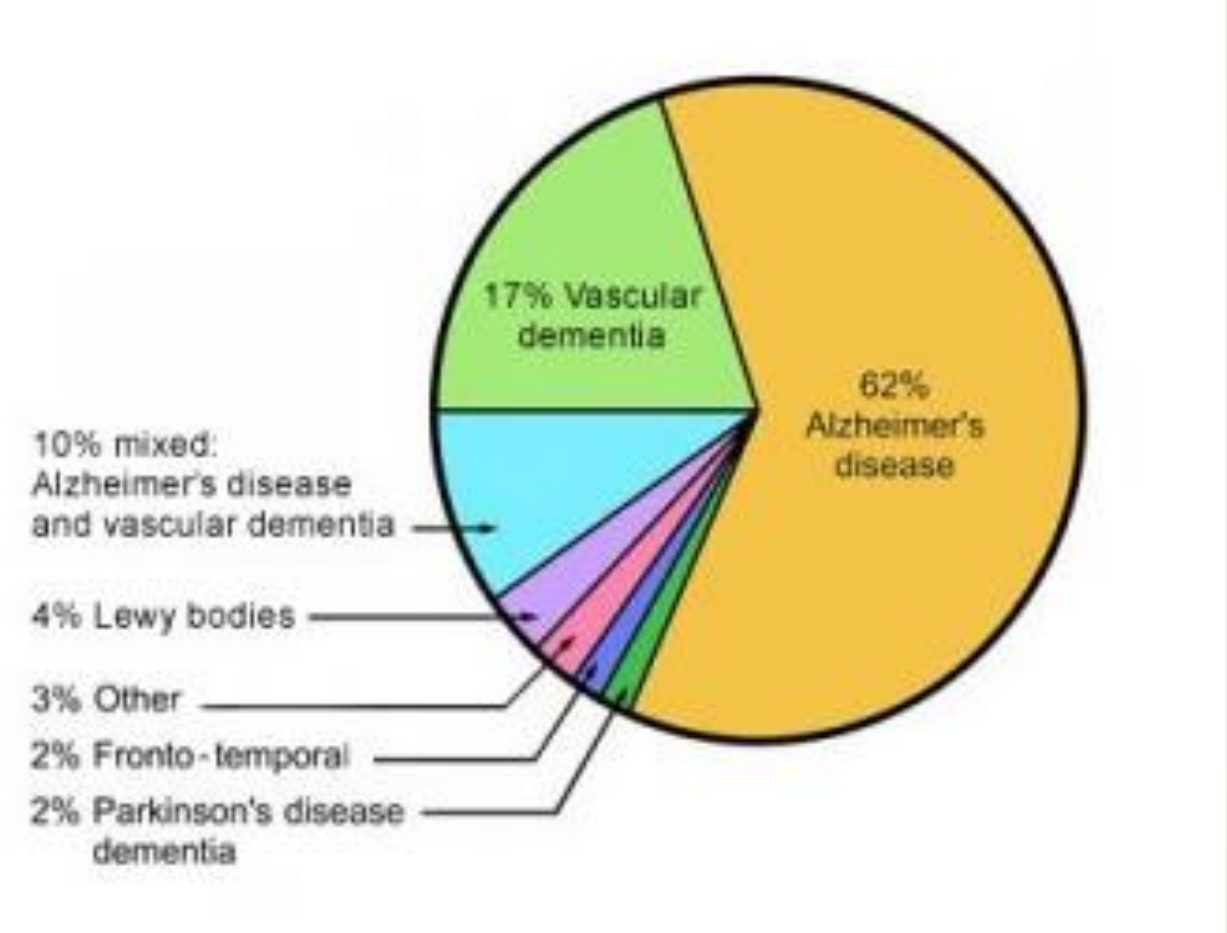
What is dementia?



WHO criteria (ICD-10)

- Add duration of six months
- With interference in activities of daily living

Common causes of dementia



Symptoms of dementia

Cognitive symptoms

- Memory
- Language
- Recognition
- Sequencing motor actions
- Organisation and planning

Psychological symptoms

- Depression
- Anxiety
- Delusions
- Hallucinations

Behavioural symptoms

- Apathy
- Agitation
- Aggression
- Wandering
- Abnormal vocalisations

Alzheimer's disease

- Typically:
  - Very gradual onset – brain changes precede symptoms by a number of years
  - Short term memory and orientation in time are often the first affected cognitive domains
    - May repeatedly ask the same questions
    - Think they are younger than they really are
  - As the dementia progresses they may go 'back in time'
- Young onset AD tends to be more rapidly progressive than the late onset form

Vascular dementia

- Often overlaps with AD, as 'mixed' dementia
- May be caused by multiple strokes – causing a step-wise deterioration
- Or by gradual deterioration of the small blood vessels of the brain
- Or by a single 'strategic infarct'
- VaD is associated with:
  - Hypertension, high cholesterol, smoking, diabetes, heart disease, atrial fibrillation
- May be neurological signs: limb/face weakness, visual loss
- Cognitive deficits may be more 'patchy' than in AD
- Insight may be better preserved than in AD

Lewy-body dementia

- Similar pathological process to Parkinson's disease
- Diagnostic guidelines:
  - 1. Presence of general features of dementia
  - 2. Core features:
    - fluctuating attention and concentration,
    - recurrent well-formed visual hallucinations, and
    - spontaneous parkinsonian motor signs.
  - 3. Suggestive clinical features
    - Rapid eye movement (REM) sleep behavior disorder
    - Severe neuroleptic sensitivity
    - Low dopamine transporter uptake in basal ganglia demonstrated by SPECT or PET imaging

Fronto-temporal dementia

- Onset between age 45-65
- Associated with motor neurone disease
- Behavioural variant:
  - Early loss of insight
  - Marked change in personality and social behavior, with disinhibition, lack of judgement and disorganisation
- Language variants:
  - Fluent and non-fluent types, with speech problems as the predominant early feature
- As FTD progresses, the clinical features overlap and in advanced stages it can appear similar to severe AD

LATE: Limbic-predominant Age-related TDP-43 Encephalopathy

Management of dementia

- For Alzheimer's and DLB/PDD:
- Cholinesterase inhibitors (Donepezil, Galantamine, Rivastigmine) if mild-moderate
- NMDA antagonist Memantine if moderate-severe
- NICE now recommend dual therapy is considered

- Clinical trials looking at anti-inflammatories, monoclonal antibodies, antibiotics, trazodone
- Small amount of evidence for omega-3 and vitamin D in MCI

- PSYCHOSOCIAL INTERVENTIONS – day centre, music, pets, stimulating activities, reminiscence, social care etc

3. Communicating with and managing a disturbed or challenging patient

Management of Agitation in dementia

Delphi consensus, International psychogeriatrics, Vol 31 (1) Jan 2019, pp 83-90

- Treatment of overall BPSD and agitation

- Thorough assessment and management of underlying causes
- Caregiver problem-solving/information/education
- Environmental adaptation/approaches
- Person-centred care
- Tailored activity programme
- Citalopram
- Treat pain/analgesia
- Risperidone

Management of delirium

- See NICE statements
- See SASH delirium guideline, which is based on SIGN guideline
- Optimise non-pharmacological measures
- Haloperidol/Risperidone/Olanzapine/Lorazepam only if risk-benefit analysis supports their use. They are hazardous drugs.

Communicating with a challenging patient

- Consider your own safety and that of other patients
- Pay attention to your own emotions and responses, try to look calm
- They might be hard of hearing – consider writing messages down
- They might lip read so speak clearly
- Use a warm, friendly manner without being condescending
- Listen to what they are saying or asking for, they want to be listened to
- Gentle distraction helps with some patients
- Reorientate regularly
- Don't argue
- Active listening, non threatening posture etc
- Tell the patient what is happening, if safe to do so

Summary

We have covered:

- Acute confusional state/delirium
- Chronic cognitive impairment/dementia
- Communicating with and managing a disturbed or challenging patient

Any Questions?