Diagnosis and management of delirium in the community

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- Importance of delirium, clinical features and subtypes
- Barriers to recognition
- Risk factors
- Management in the community

Conflicts of interest to declare : none
Delirium is common

- Community point prevalence 1.1% in over 55’s
- Rates of delirium in the hospitalised elderly range from 10% to 40%; in residential care ~10%
- Half or more cases are of the ‘hypoactive’ subtype - these tend to have a worse prognosis but are more often missed
Myths about delirium

- Delirium is fully reversible
  - A substantial minority of elderly people never regain their former cognitive or functional level after an episode of delirium

- Delirium is short-lived
  - Older delirious patients are more likely to have a prolonged course - perhaps 15% persist beyond 30 days
Delirium is often missed

- One- to two-thirds of delirium cases may be unrecognised

- Barriers to recognition:
  - fluctuating course
  - ‘Quiet’ delirium
  - failure to establish baseline functioning
  - co-incidence with dementia
  - ageism
Delirium is dangerous

- Delirium is consistently associated with poor outcomes within hospital and after discharge.
- These poor outcomes are not simply because delirium is associated with more severe illness.
- Delirium is a medical emergency.
- It is often the only symptom of acute illness in the elderly.
Case 1 - Mrs A, a 75 year old widow

- Not known to you. Brought in to surgery by a concerned neighbour who found Mrs A ill in bed, not caring for herself. Some white pills dropped on the floor.

- Mrs A is confused, irritable and bewildered, and unable to give any useful history.

- Is this delirium?
First steps in assessment of the ‘confused’ patient

(A reliable informant is invaluable)

Three key questions to ask:

- **When did it start?**
  - hours, days, weeks, months, years
  - precipitating event(s): medical, psychosocial

- **How were they functioning before the current illness?**
  - cognition, ADL, social

- **How did the current illness progress?**
  - abrupt recent onset, with fluctuation
  - gradually worse over months/years
  - ‘step-wise’
Poor performance on cognitive evaluation

- Delirium
- Dementia
- Depression or anxiety
- Deafness
- Dysphasia
- Drowsiness
- Drugs
- Doesn’t speak English
- Doesn’t want to co-operate
Case 2 – Mrs B, a 91 year old nursing hospital resident with mild dementia

- You are asked to see her due to sudden worsening of urinary incontinence and several recent falls. Normally a good sleeper, she has become wakeful and calls out at night.
- She has nodded off in her chair; you wake her but she fails to recognize you at first and appears muddled when you chat to her.
- What clinical features of delirium are evident? What more do you need to do, to establish this is a case of delirium?
Clinical features of delirium

- **Acute confusion** - an abrupt onset of muddled speech or behaviour and/or decline in ADL functioning
- **Fluctuation** during the course of the day (often worse at night)
- **Difficulty focusing, sustaining, or shifting attention** is the most striking cognitive deficit; also forgetfulness and disorientation
- **Change in level of alertness** - either reduced level of consciousness or increased (hypervigilant); sleep/wake cycle often disturbed
- **Disorganised thinking** (rambling, illogical, or incoherent); suspiciousness
- **Psychomotor changes** - either agitation or retardation
- **Misperceptions** (especially visual); vivid ‘dreams’; recognition errors; illusions; hallucinations
- **Emotional changes** - anxiety, tearfulness, anger; blunting
Cognitive testing

- Some systematic appraisal is vital – this will give valuable clues to the kind of confusional state occurring
- Ideally MOCA or MMSE (serial evaluations may be useful)
  
  
- If standardised test not feasible, ask basic questions to establish orientation and recall
Case 1 - Mrs A (75), brought in with poor self-care & delirium

On examination Mrs A is confused, irritable and bewildered, and unable to give any useful history. She is dirty and disheveled, smells of urine and has temp of 36.5, P 95/min, irreg; O2 sats 95, BP 110/60. Mild ankle oedema, basal creps

- How would you proceed?
Delirium - causation

- Toxins
- OR
- Altered metabolism

Neurotransmitter abnormality (especially ACh)

- Cortical dysfunction (confusion)
- AND
- Brainstem dysfunction (altered alertness)

Consider: balance of vulnerability & precipitating factors
Pathogenesis of delirium
Increased risk of delirium

- The very young or the very elderly
- Pre-existing cognitive impairment / dementia
- Structural brain disease (e.g., previous CVA, PD, brain damage)
- Impaired functional status (especially poor mobility)
- Chronic comorbidities, with multiple medications
- Severe acute illness or major surgery
- Nutritional deficiencies
- History of alcohol abuse
- Visual and/or hearing impairment
- Use of physical restraints
- Use of a bladder catheter
Some common etiologic factors

- Fluid/electrolyte disturbance
- Infection
- Medication toxicity or withdrawal
- Metabolic derangement
- Cardiovascular disorders - MI, CHF, hypoxia
- Urinary retention, fecal impaction
- Sensory impairment
- Other causes: acute stroke, status epilepticus (non-convulsive), hypertensive encephalopathy, raised intracranial pressure, anaemia, alcohol or recreational drug withdrawal, trauma, surgery/anaesthesia, ECT
Case 2 – Miss B, a 91 year-old lady with mild dementia, now also delirious

- Her usual drugs are: furosemide, nifedipine, metoprolol, ISMN, omeprazole, temazepam. Oxybutinin added one month ago; citalopram added two weeks ago.

- Could her delirium be iatrogenic?
Drugs that may worsen cognitive performance

- **Sedatives/hypnotics**: benzodiazepines, zopiclone
- **Analgesics**: opioids, nefopam, NSAIDs, quinine
- **Drugs with strong anticholinergic properties**: antihistamines, antispasmodics, cyclic antidepressants, neuroleptics
- **Cardiac**: antiarrhythmics, some antihypertensives, digoxin
- **Gastrointestinal**: H2-antagonists, proton-pump inhibitors (occasionally), prochlorperazine, metoclopramide
- **Miscellaneous**: anticonvulsants, corticosteroids, antiparkinsonian drugs, lithium, simvastatin, antibiotics (occasionally), pro-serotonergic drugs (‘serotonergic syndrome’), calcium/vitamin D, terazosin, interferon
Case 1 - Mrs A (75) brought in with poor self-care & delirium - CCF, ?UTI

You decide to arrange urgent respite care.

Two nights later in rest home Mrs A becomes floridly ‘confused’ and resistive to cares. She is plucking at her bedclothes.

- What might be occurring? What would you do about it?
Case 2 – Miss B, a 91 year-old lady with mild dementia, now also delirious

- Why is it important to identify and label delirium in this patient?
Dementia vs delirium – points of difference

**Delirium:**
- abrupt onset and fluctuating course
- prominent attentional deficit, disorientation, sleep disturbance, misperceptions
- Diffuse physiological disruption rather than structural lesion(s)

**BUT: delirium ‘on top of ’ dementia is common**

- Why is it important to distinguish delirium from dementia?
Case 2 – Miss B, a 91 year-old lady with acute-on-chronic brain failure

- Her medications are simplified and a sensor mat installed in her room at night.
- She remains delirious; a few nights later she trips while trying to get to the toilet unaided, and fractures a hip.
- In hospital, postoperatively, she is treated with haloperidol and increased temazepam.
- She dies 5 days later of aspiration pneumonia.
Case 3 - Mr E, 81-year-old retired builder, separated, lives alone in own home

5 year history of Parkinson’s disease, now on high-dose levodopa; severe on/off phenomenon and peak dose dyskinesia. Mild cognitive impairment (variable). Often has visual hallucinations, mainly at night, of children in the room.

Dependent on ex-wife and visiting district nurse; makes disinhibited remarks.

Develops chest infection with delirium; wandered outside at night, fell in street; refuses respite care

What is your management plan?
General supportive management

- Educate patient and their family about delirium
- Avoid hospital if possible!
- Re-orientation strategies (clock, calendar, familiar/reassuring objects and people)
- Close, sympathetic surveillance - ideally by family member or (in residential care) consistent nursing personnel
- At night, keep the room quiet with low-level lighting; relaxation strategies to help sleep and reduce anxiety (breathing exercises, music, touch)
Medical management

- Seek, identify & treat underlying cause(s)
- Encourage oral (or subcut) fluids and good nutrition; vitamin supplements for malnourished/alcoholic patients
- Make sure glasses and hearing aids are worn
- Minimise physical restraints, tubes and immobilising devices; maintain mobility, avoid unnecessary bed rest
- Manage constipation and urinary retention
- Manage pain (with caution)
Drug treatment in delirium

- If any psychotropic treatment is necessary (distressing or dangerous symptoms) haloperidol is usually the drug of choice.
- Atypical neuroleptic treatment (eg quetiapine or olanzapine) may be an alternative for patients with Parkinsonism.
- Diazepam is useful for alcohol or benzodiazepine withdrawal delirium.
- Apart from the above situations, benzodiazepines are best avoided if possible.
- Place of cholinesterase inhibitors, melatonin?