Clearing up confusion: delirium in the general hospital

Dr Jim Bolton
St Helier Hospital Liaison Psychiatry Service
Questions we’re often asked about patients with acute confusion

• “The patient is hallucinating. Is it schizophrenia?”
• “We can’t find a cause. Are you sure it’s delirium?”
• “Can we give them something to calm them down?”
• “Do they have capacity?”
• “The bloods are now normal, but patient is still confused. Are you sure it’s delirium?”
• “Will you take them away?”
Terminology

- Acute confusional state
- Acute organic reaction
- Organic brain syndrome
- Delirium
  - preferred diagnostic term
  - from Latin “de lira” – “out of the furrow”
What is delirium?

• Complex neuropsychiatric disorder
• Final common pathway of range of insults to the brain
There’s a lot of it about…

• High rates in a general hospital
  – ≥ 30% of inpatients
  – especially elderly, post-op., CNS disease, terminally ill

• Not recognised in 2/3 of inpatients
Clinical features

- Global impairment of cerebral function
- Conscious level - altered
- Cognition – global impairment
- Perception – e.g. illusions, hallucinations
- Mood – e.g. labile, low, irritable, frightened
- Thinking – e.g. delusions
- Activity - hyper- and hypo-activity
- Sleep-wake cycle - disturbed
- Fluctuating course
“The patient is hallucinating. Is it schizophrenia?”

- First onset unlikely during acute admission
- Especially if older
- Perceptual problems are common in delirium
- Visual hallucinations suggestive of organic disorder
- Similarly: “Do they need an antidepressant?”
  – mood symptoms common in delirium
Causes of delirium

• A sufficiently severe insult to the brain
• Final common pathway of many causes, often in combination:
  – Underlying medical condition
  – Medical treatments
  – Alcohol & substance misuse / withdrawal
  – Unknown
Vulnerability to delirium

Cerebral reserve

Age
“We can’t find a cause. Are you sure it’s delirium?”

- Often due to multiple seemingly minor causes in a vulnerable individual
- Or no identified cause, but clinical picture is clear
- Causes often overlooked
  - alcohol withdrawal
  - newly prescribed medications
  - pain
Commonly implicated drugs

- Opioid analgesics
- Benzodiazepines
- Antiparkinsonian drugs
- Steroids
Pathophysiology

• Clinical manifestation of disruption of neuroendocrine homeostasis
• Common presentation of variety of different pathophysiological mechanisms…
• …which impact on central metabolism, nerve conduction and blood brain barrier permeability
Pathophysiology

- Functional neuroimaging – multiple areas of disordered cerebral function
- EEG – diffuse slowing of cortical activity
- Neurotransmitters
  - e.g. cholinergic deficiency, dopaminergic excess
- Cytokines
  - e.g. interleukins, TNF-alpha, interferon
Assessment

History
• Time course and pattern of confusion
• Past history of confusion
• Past & current medical history
• History of drug or alcohol misuse

Examination
• General, neurological, mental state, cognitive
• Emphasis on identifying acute medical problems
Assessment

• **Investigations**

• Physical investigations on basis of history & examination
  – blood tests
    • FBC, CRP, U&Es, LFTs, TFTs, calcium, B12, folate
  – urinalysis, ECG, CXR
  – oxygen saturation
  – cerebral imaging if head trauma, or new focal neurological signs
  – EEG in selected cases
Assessment

- Investigations
- Review drug chart – new or withdrawn drugs, altered dose?
- Informants – ward staff, family, carers
Differential diagnosis

• Dementia
  – Both states of global cognitive impairment
  – Dementia increases vulnerability to delirium
  – Corroborative history important
    • e.g. onset, duration and course of symptoms

• Depression
  – “pseudo-dementia”
## Delirium vs. dementia

<table>
<thead>
<tr>
<th>Features</th>
<th>Delirium</th>
<th>Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset</td>
<td>Sudden</td>
<td>Insidious</td>
</tr>
<tr>
<td>Course</td>
<td>Fluctuating</td>
<td>Persistent</td>
</tr>
<tr>
<td>Duration</td>
<td>Days / weeks</td>
<td>Months / years</td>
</tr>
<tr>
<td>Consciousness</td>
<td>Impaired</td>
<td>Clear</td>
</tr>
<tr>
<td>Hallucinations</td>
<td>Common - esp. visual</td>
<td>Often absent</td>
</tr>
<tr>
<td>Delusions</td>
<td>Fleeting</td>
<td>Often absent</td>
</tr>
<tr>
<td>Cognitive testing</td>
<td>Impaired</td>
<td>Impaired</td>
</tr>
</tbody>
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Management - physical

• Treat the underlying cause(s)
• Minimise polypharmacy
• Withdraw contributory drugs if possible
• Monitor vital signs & intake
• Pain management
• Early mobilisation
Management - psychosocial

• Environment
  – bright lighting, familiar staff, calm environment, close to nursing station or side room
• Maintain sleep-wake cycle
• Re-orientation
  – e.g. window, clock, calendar
• Minimise sensory impairment
  – e.g. ear wax, hearing aids, spectacles
• Reassure & explain to family
  – important role in re-orientation
Drug treatments

• Avoid if possible (unless DTs)
  – May worsen confusion
  – Increased risk of falls

• Use when
  – patient poses a risk to themselves or others
  – de-escalation ineffective

• Little evidence on which to base guidelines
Drug treatments

• Internationally – haloperidol and lorazepam most commonly recommended drugs

• NICE recommends haloperidol & olanzapine

• Haloperidol
  – most frequently recommended
  – NB ideally check QTc prior to use

• Olanzapine
  – NB increased risk of stroke in older adults with dementia
Drug treatments

- Short term (<1 week)
- Start with low dose
- Titrate cautiously according to symptoms
- Use antipsychotics with caution or not at all in Parkinson’s & dementia with Lewy bodies
- Alcohol withdrawal
  - Benzodiazepine withdrawal regimen
Assessing capacity in delirium

• Decision specific
  – Capacity to do what?
  – May have capacity to make some decisions, but not others

• Likely to fluctuate with delirium
  – May have capacity during more lucid intervals

• Can the decision wait?
  – e.g. long-term care decisions
Prognosis

- May take several weeks to resolve
- Cognitive decline may persist
- Mortality 2X that of non-delirious patients with similar medical conditions
- Associated with
  - Functional decline
  - Poorer rehabilitation
  - Institutionalisation
  - Rehospitalisation
Why is delirium often missed

- Lack of awareness of the diagnosis
- Mild symptoms at outset
- Fluctuating course
- Hypoactive delirium more easily missed
Prevention (NICE)

• Delirium can be prevented in 1/3 of those at risk

• Highlighted risk factors
  – Age 65 years or over
  – Cognitive impairment (past or present)
  – Severe illness
  – Current hip fracture
Prevention (NICE)

- Consistent staffing
- Avoid moving if possible
- Within 24 hours of admission, assess for common potential causes of delirium
- … and address these through multidisciplinary care
- Regular reassessment
“Will you take them away?”

• “No”

• But with which cases can psychiatry help?
  – Uncertain diagnosis
  – Advice on symptom management, especially drug treatment
Conclusions

• Delirium is common
• Increased risk of mortality and disability
• Often missed
• But it is preventable & treatable
• Management involves physical, psychological & social strategies
...and after it’s over?

- Reassure patient & family
- Written information
  – [www.rcpsych.ac.uk](http://www.rcpsych.ac.uk)