Delirium: Advanced Liaison Psychiatry 2018

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Delirium – reasons for referral to liaison psychiatry

- Can you arrange for a psychiatric admission?
- How do we stop this patient from leaving?
- Is this psychosis?
- What medication should we use for this agitated patient – we’ve tried everything!
- This person hasn’t responded to the antidepressant we started.
- This patient is pretending to be asleep – we want to discharge them.
Delirium – reasons for referral to liaison psychiatry

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Chat with your neighbour about the most challenging delirium case you’ve had.
Delirium - definition

What is it?
Delirium - definition

- **Acute** onset (hours to days)
- **Fluctuating** course
- **Poor attention** (directing, focusing, sustaining, shifting)
- **Altered alertness level** – eg hyperalert, drowsy, or sometimes both.
- Disorganised thoughts and speech (aka thought disorder)
- **Visual hallucinations**
- **Sleep cycle reversal**

- Underlying physical cause, which should (in theory) be treatable
Basic principles - delirium

Delirium is an acute generalised psychological disturbance. It is usually reversible. It can take hyper- and hypo-active forms. Delirium is very common in the hospitalised elderly person.
Delirium – implications

Delirium is an **acute generalised psychological disturbance**. It is usually **reversible**. It can take hyper- and hypo-active forms. Delirium is **very common in the hospitalised elderly** person. It causes:

- Increased mortality
- Increased dependency
- Increased risk of dementia
- Increased risk of further delirium
- Increased rates of institutionalisation
- Increased rates of readmission
- PTSD
- Carer burden
Delirium – predisposing factors

- Dementia
- Age over 70
- Previous delirium
- Previous alcohol misuse
- Visual and/or hearing impairment
- Previous head injury
- Previous TIA or stroke
- Polypharmacy
- Comorbidity
- Catheterisation
- Dehydration
- Poor nutrition
- Having major surgery
- Being physically restrained
Delirium – precipitating factors

- Drug intoxication – alcohol, opiates
- Infection – UTI, LRTI
- Alcohol withdrawal
- Stroke
- Hepatic encephalopathy
- Hypoxia
- Hypo and hyperglycaemia

- Pain
- Constipation
- High dose steroids causing mania – should we call this delirium?
Delirium – recognition

To recognise delirium relies on *all* health care staff being alert to changes in their patient. Families and carers may often be the first to notice something is wrong.

To pick up delirium systematically, use the Confusion Assessment method (CAM).


Or the 4AT – see [www.the4AT.com](http://www.the4AT.com)

These tools do not assess severity or monitor progress of delirium.
# Delirium – recognition with the CAM

## Confusion Assessment Method

| Feature 1: Acute Onset and Fluctuating Course | Obtained from a family member or nurse:  
• Is there evidence of an acute change in mental status from the patient’s baseline?  
• Did the (abnormal) behavior fluctuate during the day, that is, tend to come and go, or increase and decrease in severity? |
| Feature 2: Inattention | Did the patient have difficulty focusing attention, for example, being easily distractible, or having difficulty keeping track of what was being said? |
| Feature 3: Disorganized thinking | Was the patient’s thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject? |
| Feature 4: Altered Level of consciousness | Overall, how would you rate this patient’s level of consciousness?  
  alert [normal]),  
  vigilant [hyperalert],  
  lethargic [drowsy, easily aroused],  
  stupor [difficult to arouse], or  
  coma [unarousable]) |

The diagnosis of delirium by CAM requires the presence of features 1 and 2 and either 3 or 4.
Delirium – recognition with the CAM

Acute Onset and fluctuating Course
AND
Inattention
AND
Disorganised thinking OR altered alertness

Slightly different approach needed in the ICU – see CAM-ICU protocols
Delirium – differential diagnosis

- Pretty much any psychiatric condition can mimic delirium.

- For example, depression / adjustment disorders can mimic hypoactive delirium

- Alternatively, a hyperactive delirium can look like mania

- Delirium can be hard to diagnose in the presence of co-morbid dementia

- Collateral history, investigations, and the passage of time are your friends in distinguishing the true cause of the presentation
## DDx (ALTERED MENTAL STATUS)

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>DELIRIUM</th>
<th>DEMENTIA</th>
<th>DEPRESSION</th>
<th>ACUTE PSYCHOSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset</td>
<td>Acute (hours to days)</td>
<td>Progressive, insidious (weeks to months)</td>
<td>Either acute or insidious</td>
<td>Acute</td>
</tr>
<tr>
<td>Course over time</td>
<td>Waxing and waning</td>
<td>Unrelenting</td>
<td>Variable</td>
<td>Episodic</td>
</tr>
<tr>
<td>Attention</td>
<td>Impaired, a hallmark of delirium</td>
<td>Usually intact, until end-stage disease</td>
<td>Decreased concentration and attention to detail</td>
<td>Variable</td>
</tr>
<tr>
<td>Level of consciousness</td>
<td>Altered, from lethargic to hyperalert</td>
<td>Normal, until end-stage disease</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Memory</td>
<td>Impaired commonly</td>
<td>Prominent short- and/or long-term memory impairment</td>
<td>Normal, some short-term forgetfulness</td>
<td>Usually normal</td>
</tr>
<tr>
<td>Orientation</td>
<td>Disoriented</td>
<td>Normal, until end-stage disease</td>
<td>Usually normal</td>
<td>Usually normal</td>
</tr>
<tr>
<td>Speech</td>
<td>Disorganized, incoherent, illogical</td>
<td>Notable for parsimony, aphasia, anomia</td>
<td>Normal, but often slowing of speech (psychomotor retardation)</td>
<td>Variable, often disorganized</td>
</tr>
<tr>
<td>Delusions</td>
<td>Common</td>
<td>Common</td>
<td>Uncommon</td>
<td>Common, often complex</td>
</tr>
<tr>
<td>Hallucinations</td>
<td>Usually visual</td>
<td>Sometimes</td>
<td>Rare</td>
<td>Usually auditory and more complex</td>
</tr>
<tr>
<td>Organic etiology</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Delirium quiz – mandatory pass rate 100%

What might a Roman farmer conceivably exclaim (in Latin), if, while ploughing, his plough had hit a rock and jumped out of the furrow?

Destiny, Death, Dream, Destruction, Despair, and Desire are six of the Endless in Neil Gaiman’s Sandman comics – who is the seventh?

Which Italian prog rock band had a hit in 1972 with their (pretty awful) song Jesahel?

Complete this lyric from the (rather good) third single of Ladyhawke's debut album: “Stop playing with my ..........., cause I’m outta my head and outta my self control”
Delirium – management

Management should include:

- a search for, and treatment of (!) the cause (most commonly infection)
- using nursing, pharmacological and legal interventions, to deal with behavioural consequences
- diagnosis or follow up of any possible dementia
Delirium – search for the cause

Tailor according to age of patient, history, and nature of symptoms

- FBC, renal, liver, thyroid, glucose, CRP, Ca,
- CT head
- MRI, LP, autoantibodies

Serial CRP is particularly useful
Delirium – non-drug interventions

- Reorientation – lots of it, verbal and non-verbal (e.g., clocks)
- Simple communication
- Thoughtful use of side rooms and relative visits (i.e., only if they help!)
- Close attention to hydration and nutrition
- Use of badging systems on the ward to help recognition and handover (e.g., coloured tray)
- Optimise hearing and visual impairments
- Close attention to retention and faecal impaction
- Ward wide sleep policy
- Special levels of observation, liaison with security
- Delirium related KPIs, QI projects, champions, workgroups, policies, etc …
Delirium – drug interventions

- Aim for **single agent, lowest effective dose, shortest time** …
- People debate drug choice in delirium ENDLESSLY!
- Ensure that your hospital has **easily found protocols** for rapid tranquillisation, management of delirium, use of covert medication, and management of alcohol withdrawal.
- In Exeter we either use **olanzapine 2.5mg, or lorazepam 0.5mg**, sometimes prn initially.
- Often the choice of agent, and mode of administration (eg PO vs IM) has to take place as part of a wider discussion about the patient’s **best interests**, and the willingness / skills of the hospital staff in restraining patients.
NICE - pharmacological interventions for BPSD

Severe non-cognitive symptoms (causing significant distress or risk) may be offered treatment with an antipsychotic drug if the following is done:

- There should be a full discussion with the person with dementia and/or carers about the possible benefits and risks of treatment. In particular, cerebrovascular risk factors should be assessed and the possible increased risk of stroke/TIA and possible adverse effects on cognition discussed.
- Target symptoms should be identified, quantified and documented.
- Changes in target symptoms should be assessed and recorded at regular intervals.
- The effect of comorbid conditions, such as depression, should be considered.
- The dose should be low initially and then titrated upwards.
- Treatment should be time limited and regularly reviewed (every 3 months or according to clinical need).

Other meds include benzodiazepines, sedating antihistamines (eg promethazine), sedating antidepressants (eg trazodone).

REMEMBER THE QTC
Delirium – legal interventions - MCA

Most people with delirium will have, at some point, impaired mental capacity to make decisions about their health and care.

The UK legal framework for managing this is the Mental Capacity Act (MCA)

The Act is very cumbersome, due to unforeseen (but ironic) lack of capacity in the system to do the required volume of assessments.

The practical outcome is that only people who are declining treatment, or trying to leave, tend to be formally managed under the required mechanism, which are the Deprivation of Liberty Safeguards (DOLS).

The hospital has to make the DOLS application.

Even if a DOLS is requested, the team still needs to make a best interests decision about what treatment to pursue, and this step is often missed.
Delirium – legal interventions - MHA

There is nothing to prevent the use of MHA in delirium.
However, I have never used it.
I can two scenarios where I might do:

- Where someone has a mental illness needing treatment alongside a physical health condition
- Where the person is presenting particular risk of harm to others
Delirium prevention

Hospital Elder Life Program – systematic intervention run along quality improvement lines

Intervention – six standardised protocols for the following delirium risk factors:
- cognitive impairment – cognitive stimulation activities
- sleep deprivation – unit wide noise reduction strategy at night.
- Immobility – early mobilisation
- visual impairment – visual aids, with daily reinforcement
- hearing impairment – portable hearing assistance device, with daily reinforcement
- dehydration – encouragement to take oral fluids

You need a team of trained volunteers!

<table>
<thead>
<tr>
<th></th>
<th>Intervention group</th>
<th>Usual-care group</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Delirium</td>
<td>9.9%</td>
<td>15%</td>
</tr>
<tr>
<td>Days with delirium</td>
<td>105</td>
<td>161</td>
</tr>
</tbody>
</table>


Collateral history is important

History Number 1

An 84 year old man was first referred to an Older People’s CMHT by his GP on 7 October 2013, requesting an urgent assessment, because he was threatening to kill his wife when she was sleeping, knocking on neighbours’ doors asking them to take him home, standing vacantly in the garden, and appearing forgetful.
Collateral history is important

**History Number 1**

An 84 year old man was first referred to an Older People’s CMHT by his GP on 7 October 2013, requesting an urgent assessment, because he was threatening to kill his wife when she was sleeping, knocking on neighbours’ doors asking them to take him home, standing vacantly in the garden, and appearing forgetful.

There was also one episode of him biting his wife’s fingers. It was established that these symptoms started following his discharge from the Casuabon unit, where he was undergoing rehab after an admission to Whipps cross for a urine infection (late Aug 2013).
Collateral history is important

History Number 2 - Collateral history from daughter

She dated the most dramatic change in her father from the time of his urine infection in Whipps cross. She felt he was worse after his period of rehabilitation in the Casuabon unit. She also felt that he has been experiencing memory problems since January 2013, which had gradual onset, but no significant decline. This had led him to forget new information, and to become repetitive in conversation.
Collateral history is important

History Number 3 - Collateral history from wife

Joyce described that she first noticed a change 18 months ago, when he stopped doing gardening, DIY, and making things (such as pieces of ironmongery). He has also stopped reading books, which used to be a favourite hobby. This apathy has been accompanied by mild irritability, which dramatically worsened since his episode of urine infection and associated delirium in August this year. There have been no psychotic symptoms, and no mood disturbance. Over the last year, there has also been mild and variable memory disturbance, where he may forget names.

Prior to the August admission, he was able to wash and dress himself, but over the past year had become more worried about falling. He has never cooked or shopped, and Joyce has always managed their finances.

She also disclosed that there has been a long-standing (35 year) history of domestic violence, including verbal abuse, having things thrown at her, and physical attacks such as being punched.
Delirium – follow up

We tend to advise GP follow up only, but would consider specialist follow up for the following groups:

- Prolonged symptoms associated with risk or distress
- Ongoing antipsychotic prescription
- A collateral history of cognitive impairment, but not strong enough to justify a dementia diagnosis
- Failure to return to cognitive or functional baseline
Case History

George, a 92 year old man has been admitted with an MI. He is constantly trying to get out of his bed, has pulled out his iv, and has become tangled in his nasal oxygen tubes. He thinks he is about to give a speech, and is on an aeroplane above the atlantic.

Potential diagnoses? – BRAINSTORM IN PAIRS
Case History

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What other info do you need, and how to get it?
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What other info do you need, and how to get it?

- GP – Past medical history and medication
- Family / friends – Personality and functional changes
- Investigations - Urine dip, CRP/WCC, vital signs, etc
Case History

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- Revisit diagnosis in light of new information.
- Management?
  - Immediate / Longer term
  - Bio-psycho-social
  - Legal mechanisms
EMQ - Psychiatric diagnosis in older people (cont)

A. Acute & transient psychotic disorders  
B. Delusional disorder  
C. Charles Bonnet Syndrome  
D. Severe depressive episode  
E. Severe depressive episode with psychotic symptoms  
F. Delirium  
G. Alzheimer’s Dementia  
H. Vascular dementia  
I. CVA

From the above list, pick the diagnosis that best matches the following case vignettes:

i) John is a retired politician who complains that his memory is deteriorating. His wife has noticed that he has trouble remembering names. He is a bit low in his mood, and his MMSE is 27. He is normotensive, with normal fasting cholesterol and glucose.

ii) Mary is 75 and was admitted to hospital two days ago for an MI, on a background of angina and high blood pressure. Her family complain that she is a recluse. The nurses call you as she is refusing to go for her Echo – she complains that the porters are trying to remove her brain, and that she can see mutant animals running around the ward. She is disorientated. Detailed neurological exam is impossible, but her speech is grossly normal, and she is able to walk.
Delirium principles – in summary

Delirium is an acute generalised psychological disturbance. It is usually reversible. It can take hyper- and hypo-active forms. Delirium is very common in the hospitalised elderly person. Management should include:

- **a search for, and treatment of (!) the cause** (most commonly infection, iatrogenic, cerebrovascular ischaemia, heart failure)

- using **nursing, pharmacological and legal interventions**, to deal with behavioural consequences