DELIRIUM IDENTIFICATION AND MANAGEMENT IN FRAIL ELDERLY

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DELIRIUM - Definition

- Transient disturbance in cognition
- Characterised by impaired cognitive function, attention and level of consciousness
- Develops over short period of time and generally fluctuates during course of the day
- Usually only lasts a few days, but can persist for weeks or months

Defined by the American Psychiatric Association (2013) as:
“a disturbance of attention or awareness that is accompanied by a change in baseline cognition that cannot be better explained by a pre-existing or evolving neurocognitive disorder.”
DIAGNOSTIC CRITERIA

A) There is a disturbance in attention and awareness
B) Develops over a short period of time, typically hours to days. There is a change in baseline attention and awareness. It fluctuates throughout the day.
C) Also memory deficit, disorientation, language, or perception disturbances
D) The disturbance in A and C are not better explained by another pre-existing established or evolving neurocognitive disorder (e.g., dementia)
E) There is evidence that the disturbance is a direct physiological consequence of another medical condition

(American Psychiatric Association, 2013)

IMPORTANCE OF DETECTING DELIRIUM

Delirium is considered a medical emergency

- Not a normal part of ageing
- Common in older people in hospital, and frequently overlooked or misdiagnosed
- Often poorly managed
- Often caused by an underlying acute condition
- Can be prevented
- Family members can often alert staff to changes in the patient’s cognitive status
- Delirium is potentially life threatening
- Early identification and prompt management reduces severity, duration and leads to better outcomes for patients

DELIRIUM STATISTICS

• Up to 50% of older people may develop delirium in hospital\(^1\)
• 10-15% of older people admitted to hospital are delirious at time of admission\(^2\)
• In general medical units, approximately 20% of older patients will experience delirium\(^3\)
• 40-50% of older persons develop delirium after hip surgery\(^1\)
• Non-detection rates of up to 70% \(^4,5\)
• Based on more than 20 prospective studies of over 5,000 patients in the last 3 decades, a significant association was found between delirium and long-term cognitive dysfunction\(^6\)

\(^{1}\text{Canadian National Guidelines for Assessment and Treatment of Delirium, 2006}\)
\(^{2}\text{Britton, A. and R. Russell, 2006, 'Multidisciplinary team interventions for delirium in patients with chronic cognitive impairment', The Cochrane Database of Systematic Reviews, volume 2}\)
\(^{3}\text{Iseli, RK., et al., 2007, 'Delirium in elderly general medical inpatients: a prospective study', Internal Medicine Journal, Volume 37, number 12, pp. 806-11.}\)
\(^{6}\text{Witlox et al. JAMA 2011}\)

FEATURES OF DELIRIUM

• Cognitive impairment
• Perceptual disturbance
• Disordered sleep-wake cycle
• Fluctuating presentation
• Change in psychomotor activity
DELIRIUM

Subtypes – psychomotor behaviour

<table>
<thead>
<tr>
<th>Hyperactive</th>
<th>Hypoactive</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychomotor hyperactivity</td>
<td>Reduced alertness</td>
<td>Features of both increased and decreased psychomotor activity</td>
</tr>
<tr>
<td>Restless</td>
<td>Lethargic and quiet</td>
<td></td>
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<tr>
<td>Speak quickly</td>
<td>Withdrawn</td>
<td></td>
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<tr>
<td>Easily distracted</td>
<td>Sluggish</td>
<td></td>
</tr>
<tr>
<td>Hallucinations</td>
<td>Confused</td>
<td></td>
</tr>
<tr>
<td>Delusions</td>
<td>Decreased motivation</td>
<td></td>
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<tr>
<td>Agitation</td>
<td></td>
<td></td>
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<tr>
<td>Disruptive behaviours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confusion</td>
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CAUSES OF DELIRIUM

- Exact pathophysiology is still unclear
- Likely to be multifactorial
- Evidence suggests neurotransmitter disturbances
- May result from a general medical condition or substance use/withdrawal
- Common conditions associated with delirium include:
  a. Infections: such as pneumonia and UTI
  b. Stoke or subdural hematoma
  c. Kidney failure or dehydration
  d. Fractures
- Some medications are known to cause delirium including:
  - Narcotics
  - Benzodiazepines
  - Anti-parkinsonian meds
  - Anti-hypertensives

## RISK FACTORS FOR DELIRIUM

Severity and likelihood increases with the number of risk factors

<table>
<thead>
<tr>
<th>Predisposing Factors</th>
<th>Precipitating Factors</th>
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<tbody>
<tr>
<td>• Age (&gt;70 years)</td>
<td>• Use of IDC</td>
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<tr>
<td>• Pre-existing cognitive impairment (e.g., dementia)</td>
<td>• Polypharmacy</td>
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<tr>
<td>• Severe illness</td>
<td>• Benzodiazepines</td>
</tr>
<tr>
<td>• Hearing impairment</td>
<td>• Use of physical restraints</td>
</tr>
<tr>
<td>• Visual impairment</td>
<td>• Sleep deprivation</td>
</tr>
<tr>
<td>• Functional impairment</td>
<td>• Pain</td>
</tr>
<tr>
<td>• Abnormal sodium level</td>
<td>• Hypoxia</td>
</tr>
<tr>
<td>• Infection</td>
<td>• Alcohol withdrawal</td>
</tr>
<tr>
<td>• Depression</td>
<td>• End stage organ failure</td>
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<tr>
<td>• Previous delirium</td>
<td></td>
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<tr>
<td>• Alcohol abuse</td>
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Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, Clinical Practice Guidelines for the Management of Delirium in Older People, Victorian Government Department of Human Services, Melbourne, Victoria

## COMPLICATIONS OF DELIRIUM

- Increased mortality
- Higher morbidity
- Longer length of stay
- Increased likelihood of falls
- Functional decline
- Increased likelihood of admission to RAC facilities


PREVENTION OF DELIRIUM

Approximately 30-40% of delirium cases can be prevented

<table>
<thead>
<tr>
<th>Clinical Practice Strategies</th>
<th>Environmental Strategies</th>
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<tbody>
<tr>
<td>Encourage and assist with eating and drinking</td>
<td>Lighting and noise levels appropriate to time of day</td>
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<tr>
<td>Encourage independence with ADLs and regular mobilisation</td>
<td>Provide orienting information e.g. clock, wall chart with day, date, place</td>
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<td>Optimise communication - use of interpreters, cue cards</td>
<td>Encourage family and friends to visit and be involved in care</td>
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<tr>
<td>Avoid restraint</td>
<td>Bring in patients own belongings</td>
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<tr>
<td>Ensure adequate pain relief</td>
<td>Single room</td>
</tr>
<tr>
<td>Avoid indwelling catheters</td>
<td>Avoid room changes</td>
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<tr>
<td>Ensure hearing aids and glasses are functional and used</td>
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<tr>
<td>Regulation of bowel function</td>
<td></td>
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<tr>
<td>Promote relaxation and sleep. Avoid long daytime naps</td>
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<td>Provide appropriate cognitive stimulation</td>
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<tr>
<td>Re-orientate frequently</td>
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<tr>
<td>Avoid psychoactive drugs, unless absolutely necessary</td>
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RECOGNISING DELIRIUM

Signs fluctuate during course of the day
Have high level of suspicion of delirium if:

- Fluctuating mental state (often worse in the evening)
- You cannot keep the patient’s attention
- Relatively recent onset
- Memory impairment (usually loss of recent memory)
- Disorientated to time and place
- Disturbed sleep-wake cycle
- Hallucinations (visual or auditory)
- Agitation or sluggishness
- Emotional disturbance (mood swings)
- Speech disturbance – rambling speech
CONFUSION ASSESSMENT METHOD (CAM)

- Standardised, brief, validated
- Most widely tested and used tool
- Administered by trained clinicians
- Four features
- Diagnosis: presence of 1 and 2, plus either 3 or 4 (short form)
- Potential for false positive, so full clinical examination should be undertaken to confirm diagnosis

CAM

TREATMENT

1. Treat precipitating causes
   AND
2. Optimise brain function
MANAGEMENT OF DELIRIUM

Identify and treat cause
- Prompt treatment of sepsis
- Treat hypoxia
- Treat electrolyte imbalances
- Treat dehydration
- Pain
- Drug toxicity
- Substance abuse
- Review medications

Manage modifiable risk factors
- Vision aids
- Hearing aids
- Early mobilization
- Adequate hydration and nutrition
- Avoid restraint
- Continence care – avoid IDC

Provide supportive care
- Reality orientation – separate past & present
- Reassure and educate
- Identify and respond to mood
- Presence of family member
- Maintain routine
- Appropriate lighting
- Avoid unnecessary confrontation

Treat symptoms
- Non-pharmacological sleep enhancement
- Pain management
**MEDICATIONS**

- Neuroleptics are preferred agents with most evidence supporting use of haloperidol\(^1\)
- Dosage and frequency should be titrated carefully against the level of patient agitation
- Must commence at a low dose
- Antipsychotic use needs to be closely monitored by nursing and medical staff


**Deliriogenic medications**

- Benzodiazepines
- Opioid analgesics
- Corticosteroids
- Anti-parkinsonian agents
- Tricyclic antidepressants
- Diuretics
- Antiarrhythmics
- Bronchodilators
- Antiemetics
- Antihistamines
- Antipsychotics

**NURSING CARE**

- Alert medical staff of any change in cognition/MET call
- Speak softly and calmly to the patient
- Do not keep bed in elevated position (falls risk)
- Assist the patient with ambulation
- Keep a dim light on at night
- Frequently orientate the patient to place, time and situation
- Provide a structured schedule of activities that does not change from day to day
- Arrange furniture and other items in the room that the patient may need
- Provide consistency in assignment of daily caregivers
- Perform ongoing assessment of patients ability to fulfill their nutritional needs
- Involve the family members in the care of the patient
TAKE HOME MESSAGES...

Delirium is:

- A medical emergency
- Preventable
- Often overlooked, misdiagnosed and poorly managed
- If identified early and promptly managed severity and duration can be reduced resulting in better outcomes for patients

RESOURCES


Delirium Care Pathway

Best Care for Older People Everywhere: Delirium Toolkit

Clinical Practice Guidelines

Delirium Video
http://consultgerirn.org/resources/media/?vid_id=4361983#player_container