Delirium:
Are you confused?

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RCP Update
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Geriatric Giants vs. Geriatric 5Ms

Bernard Isaacs in 1965

Immobility
Instability
Incontinence
Impaired intellectual function

Mary Tinetti in 2017

Mind
Mobility
Medications
Multi-complexity
Matters Most

‘Geriatrics’ ??!!

- British Geriatrics Society
- Voted 464 to 222 to keep BGS in preference to

‘British Society for Health Care of Older People’

What is delirium?

ICD 10 (2016)

F05: An aetiologically non specific organic cerebral syndrome characterised by concurrent disturbances of consciousness and attention, perception, thinking, memory, psychomotor behaviour, emotion, and the sleep-wake schedule. The duration is variable and the degree of severity ranges from mild to very severe.

Diagnostic and Statistical Manual of Mental Disorders (DSM-5)

A disturbance of attention and awareness with additional disturbance in cognition, not explained by another pre-existing, established or evolving neurocognitive disorder or coma. The disturbance develops over a short period of time and tends to fluctuate in severity during the day with evidence of direct physiological consequence of another medical condi

SIGN 157 (March 2019)

An acute deterioration in mental functioning arising over hours or days that is triggered mainly by acute medical illness, surgery, trauma or drugs.

Guidance

NICE CG 103 June 2010, reviewed 2018

- –https://www.nice.org.uk/guidance/cg103

SIGN 157 March 2019

- –https://www.sign.ac.uk/sign-157-delirium.html

BGS CGA in Primary Care Settings 2019

- –https://www.bgs.org.uk/resources/14-cga-in-primary-care-settings-patients-presenting-with-confusion-and-delirium

Cochrane: Interventions to prevent delirium March 2016

- –https://www.cochrane.org/CD005563/DEMENTIA_interventions-prevent-delirium-hospitalised-patients-not-including-those-intensive-care-units

Why is it important? Prevalence

- 1-2% in a community setting, 14% aged over 85
- Up to 60% in post acute care facilities and care homes
- 20% adult acute general medical patients
- Up to 60% #NOF patients
- Up to 75% in ICU setting
- 30-85% in Hospice patients

Why is it important? Outcomes

Higher risk of medical complications

- infection, pressure sore, falls

Higher rates of death

Higher rates of Institutionalisation

Significant patient and carer distress

Longer length of stay

Financial cost to healthcare economy

Screening Tests

AMT (1972)

MMSE (1975)

Single Question in Delirium (SQiD)

Confusion Assessment Method (CAM)

4AT (Arousal, Attention, Abbreviated Mental Test 4, Acute change)

CAM-ICU

Intensive Care Delirium Screening Checklist (ICDSC)

SQiD: Do you think 'Mrs. S' has been more confused lately?

Quick

No training required

Any staff member

Validated in medical setting

Sensitivity 77-91%, Specificity 56-71%

No rating of severity

?Not suitable for detecting delirium superimposed on dementia (DSD)

CAM

1. Acute onset and fluctuating course
2. Inattention
3. Disorganised thinking
4. Altered level of consciousness

Delirium suggested if 1 and 2 **and** either 3 or 4

CAM

Quick

?Requires some training

Any staff member

Evidence in multiple settings

Sensitivity 46-94%, Specificity 63-100%

No rating of severity (variant)

Can detect DSD

4AT

Alertness

AMT4 – age, DoB, place, year

Attention – months of the year backwards

Acute change/ fluctuating course

>4: possible delirium +/- cognitive impairment

1-3: possible cognitive impairment

https://www.the4at.com

4AT

Quick
No training
Any staff member
Evidence in multiple settings
Sensitivity 86-100%, Specificity 65-82%
No rating of severity
Can detect DSD

Welsh Language Versions

Risk Factors for Delirium

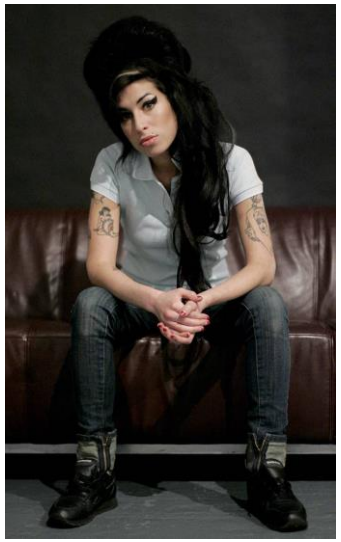
Aged over 65 years
Pre-existing cognitive impairment or dementia
Severe illness
Current hip fracture
Frailty and Multiple co-morbidities
Male sex
Sensory impairment
History of delirium
Alcohol misuse

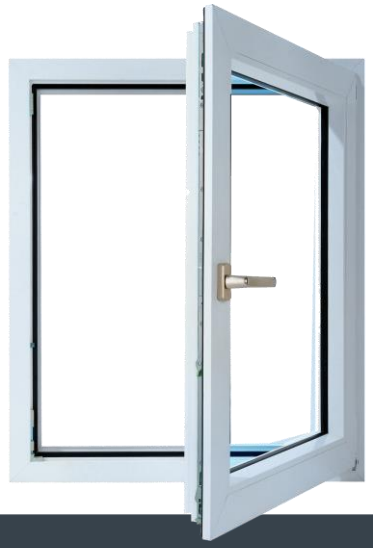
Ref: Persisco et al J Am Geriatr Soc 2018 66(10):2022-30

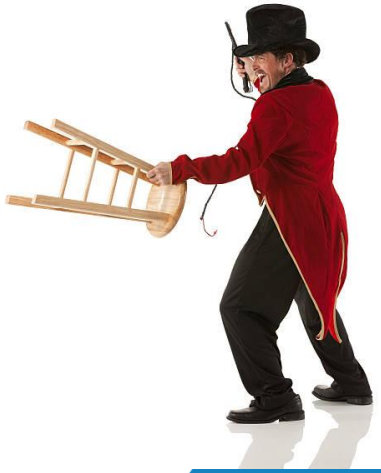
Recognition of Precipitants - 1

- All acute illness may precipitate
- Appropriate investigations
- Seek acute severe causes
  - Infection, hypoxia, hypoglaecemia, medication intoxication
- Urine dipstick is not the only answer!
- Often multifactorial
- Up to 30% of time no cause found

Medicine by Anecdote







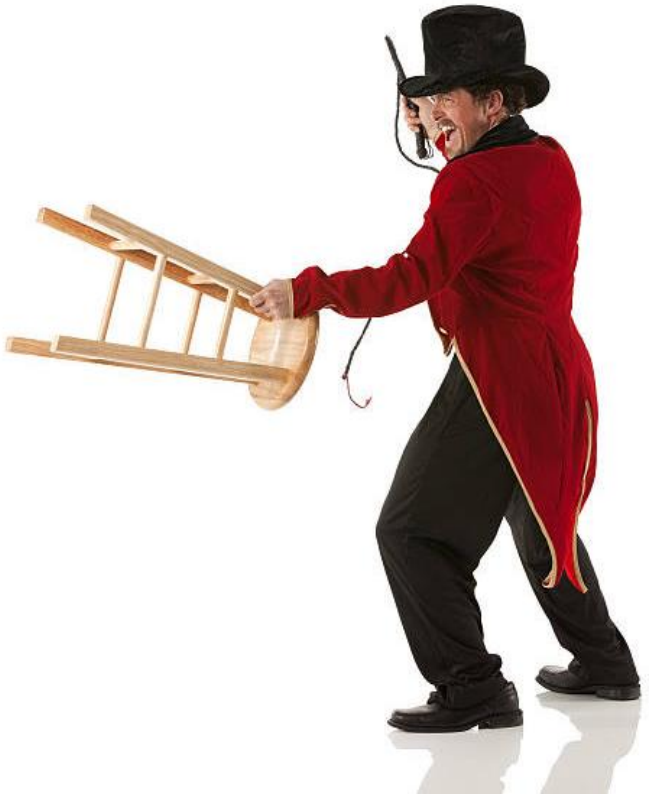
Hypoactive Delirium

- Lethargy
- Reduced motor activity
- Sleepy
- Unrecognised in up to 2/3 patients

Hyperactive Delirium

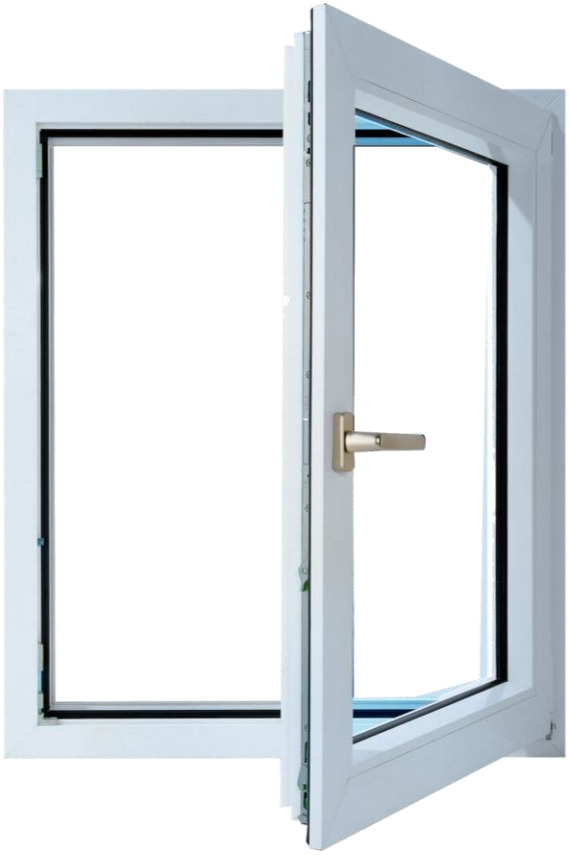
- Heightened arousal
- Restless
- Agitated
- Aggressive

- ?less common in older patients



Safety

- Individual patient
- Other patients
- Staff
- Friends and family



Recognition of Precipitants - 1

- All acute illness may precipitate
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Role of CT

- Not routinely indicated
- New focal signs
- Reduced level of consciousness
- Recent falls (do we always know?)
- Head injury
- Anticoagulation treatment

Role of EEG

- Not routinely indicated
- EEG changes non specific: diffuse slowing
- ? Incidence of epileptic activity and Non convulsive Epilepsy higher than recognised currently

- Continuous EEG monitoring more sensitive than single EEG (28% vs. 6%)

Role of LP

- Not routinely indicated
- Practically quite difficult

Recognition of Precipitants -2

- Orientation to time place and person
- Ensuring access to glasses and hearing aids
- Early mobilisation
- Good pain control
- Prevention, identification and treatment of post operative complications
- Good hydration and nutrition
- Ensuring regular bladder and bowel functions
- Medication review
- Provision of supplementary oxygen
- Limit ward moves

The Journey of a Typical Patient with #NOF

Immobility

Use of physical restraints

Use of bladder catheter

Iatrogenic events

Malnutrition

Psychoactive medications

Intercurrent illness

Dehydration

Anaesthetic Issues

Depth of anaesthesia

- Two RCTs (16.7% vs.21.4% & 15.6% vs. 24.1%)
- Surgery greater than one hour
- Aged over 60
- Excluded patients with dementia, emergency anaesthesia and #NOF

Cochrane review 2016

Prophylactic Medications

- **Haloperidol** no robust evidence
- **Olanzapine**
  - vs. placebo RR 0.36 (0.24-0.52), One study, 400 patients
- **Dexmedetomidine**
  - ?ITU or perioperative setting
- **Melatonin & melatonin agonists**
  - 3 studies,529 patients, RCT ongoing
- **Cholinesterase inhibitors**
  - Increased SE
- **Gabapentin** pilot study only
- **Ketamine**
- **No licensed product**

50% of delirium develops after admission

Multicomponent Interventions

- Cochrane review March 2016
  - Reduction in delirium RR 0.69 (0.59-0.8)
    - 7 studies, 1950 patients
  - Medical pts RR 0.63 (0.43-0.97)
    - 4 studies, 1360 patients
  - Surgical pts RR 0.71 (0.59-0.83)
    - 3 studies, 588 patients

Multicomponent Intervention-2

Address cognitive impairment and disorientation
Address dehydration and constipation
Assess for hypoxia
Address infection
- Avoid catheterisation

Address immobility
Address pain
Address poor nutrition
Address sensory impairment
Promote sleep hygiene
Medication review

Medication Specifics

Benzodiazepines

- Increase risk delirium OR 3.0 (1.3-6.8)

Opiates

- Pethidine OR 2.7 (1.3-5.5)
- Morphine OR 1.2 (0.6-2.4)
- Fentanyl OR 1.5 (0.6-4.2)
- Oxycodone OR 0.7 (0.3-1.6)

Medications-2

Tricyclics
Benzodiazepines

Anticholinergics
Antihistamines

Anticholinergic Effect on Cognition (AEC) Score

0 = ‘safe’ 1 = caution 2 = review

3 = review and switch

Management of Symptoms

Environment

- Appropriate lighting levels
- Regular cues to improve personal orientation
- Use of clocks/calendars
- Find and use hearing aids, glasses etc
- Same nursing staff
- Encourage mobility
- Calm demeanour
- Avoid unexpected alarms e.g. pumps
- Regular analgesia
- Familiar faces and visits from family
- Reassure family
- Avoid dehydration
- Good sleep hygiene

Management of Symptoms -2

AVOID

- Inter- & intra-ward transfers
- Use of physical restraints
- Constipation
- Trigger drugs
- Catheters

Practical Issues

Wandering

- Do they need something? Toilet, drink, pain
- Can they be distracted?
- Can the family help?

Rambling Speech

- Tactfully disagree,
- Change the subject
- Acknowledge the feelings expressed ignore the content

Different times?

Legal Issues

- Capacity Assessment
- Best Interest Decision
- Least Restrictive Option
- Covert Medications
- DOLS application

How long will it last, Doctor?

Usually days

Often longer

Frail older patients at highest risk

Longer duration of delirium associated with worse global cognition at 3 & 12 m

Treatment

- Haloperidol
  - Limited evidence
  - Has BNF indication (QT)
- Olanzapine
- Risperidone
- Quetiapine
- Lorazepam
  - PD, Lewy body

Treatment

- Smallest dose, shortest period of time
- Review daily
- Not for TTO

Provision of Information

- Patient
  - Depression
  - Cognitive decline
  - Undiagnosed cognitive impairment
- Family
- Primary Care

- Consider delirium
- Screen for it
- Whole site interventions to reduce risk
- Non pharmacological interventions

- Medication last resort