

Clinical Identification of...

Delirium

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Customary Financial Disclosure Slide

- ▶ I don't have any conflicts of interest to disclose whatsoever, including (but not limited to) financial relationships.



My lofty goals for the next 15 minutes...

- ▶ convey importance of the topic
- ▶ define delirium & dementia
- ▶ review clinical presentation
- ▶ review evaluation of delirium
- ▶ review etiologies to consider
- ▶ address treatment of delirium
- ▶ review prevention strategies
- ▶ end with a case if time allows



Significance – why discuss delirium?

- ▶ **It's common**, so we're all probably going to see this at some point.
 - ▶ Clinic setting.
 - ▶ Hospital setting.
 - ▶ Long-Term Care setting.
 - ▶ Our personal lives.
- ▶ It **can happen to anyone**, not just geriatric patients.
- ▶ But it's **particularly prevalent in geriatric populations**.
 - ▶ Nearly 30% at some point during a hospitalization (*Francis, J. Delirium in Older Patients, JGIM*)
 - ▶ Consequently may lead to a **false positive impression of dementia**
- ▶ Delirium often **subtle & vague sign of serious underlying problem**.



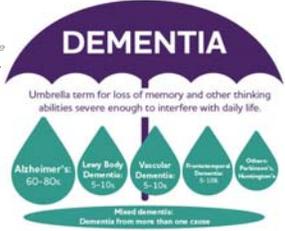
How do we define *Delirium*?

- ▶ Complicated, but consolidating elements from UpToDate, United Health Partnership, and DSM-V, delirium is...
 - ▶ **...an acute decline from baseline attention/cognition associated with psychomotor agitation that is clinically-provoked and (often) reversible.**
- ▶ It can certainly be considered a syndrome without a clearly defined unifying pathophysiology.
- ▶ Perhaps useful to think of delirium as a state of acute cognitive imbalance, which is clearly much more easily induced in elderly patients particularly those with dementia.



So then, how do we define *Dementia*?

- ▶ **Chronic decline in multiple domains of baseline cognition** (*memory, learning, attention, language, executive function*) to a degree that **interferes with individual function (ADLs/IADLs)** and is **not fully explained by alternative or concurrent diagnoses** (e.g. ADHD, Depression, etc).



Distinguishing Delirium & Dementia

<i>Delirium</i>		<i>Dementia</i>
Abrupt <small>Hours-days</small>	Onset Timing	Gradual <small>Months-years</small>
Impaired	Attention / Orientation	Preserved in early stages
Fluctuating	Lvl of Awareness	Normal
Incoherent Disorganized	Language Speech	Disease & Stage Dependent
Variable Fluctuating	Memory Impairment	Short-Term, early Long-Term, later

Signs & Symptoms

Table 1 – Common signs and symptoms of delirium

- ▶ In addition to delirium criteria discussed before →
 - ▶ Family may say pt is "not herself" or "out of it".
 - ▶ Alternatively, may be agitated/restless.
 - ▶ Fluctuating course: may appear lucid or "normal".
 - ▶ *Careful not to let this fool you on morning rounds!*

<ul style="list-style-type: none"> • Disturbed attention and awareness • Reduced level of alertness or arousal • Acute onset and fluctuating course • Fragmented sleep • Disordered thought process • Disorientation to time and place • Executive dysfunction • Memory impairment 	<ul style="list-style-type: none"> • Visuospatial deficits • Abnormalities of language • Psychomotor agitation or retardation • Reality distortion, including illusions, hallucinations, and delusions • Labile affect • Asterixis • Frontal release signs
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WARNING

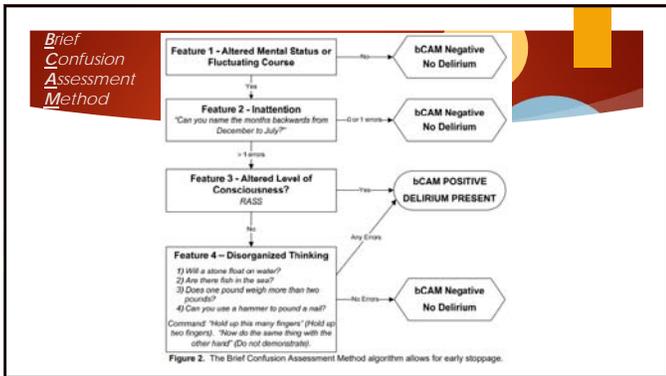
Delirium may be the only sign of serious illness in the elderly!

CC: "Ma ain't quite herself for 3 days."

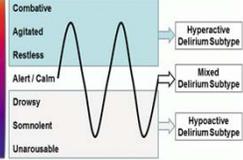
Take this chief complaint seriously!

- Obtain a **good history** of what's been going on.
 - Ask about specific elements of "ain't quite herself."
 - Ask about physical symptoms they've noticed.
 - Ask about significant environmental changes.
- Perform a **thorough physical**, including neuro exam.
- Assess using **clinical tools** specific to delirium, e.g. **bCAM** (next slide).
- Directed **testing**, e.g. labs, imaging, LP, etc.





Richmond Agitation-Sedation Scale



Richmond Agitation-Sedation Scale

- +4 Combative (violent, danger to staff)
- +3 Very Agitated (aggressive, pulls tubes/cath)
- +2 Agitated (fights vent, non-purposeful movmt)
- +1 Restless (anxious, movmt not aggressive)
- 0 Alert & Calm → Next Step: DISORGANIZED THINKING
- 1 Drowsy (awake >10s to voice)
- 2 Light Sedation (awakens <10s to voice)
- 3 Mod Sedation (mvm/eye open to voice, 0 eye contact)
- 4 Deep Sedation (0 resp to voice, resp to physical stim)
- 5 Unarousable (no response to voice or physical stim)

Combative → Hyperactive Delirium Subtype
 Agitated → Hyperactive Delirium Subtype
 Restless → Mixed Delirium Subtype
 Alert/ Calm → Mixed Delirium Subtype
 Drowsy → Hypoactive Delirium Subtype
 Somnolent → Hypoactive Delirium Subtype
 Unconscious → Hypoactive Delirium Subtype

Differential Diagnosis Mnemonics...

<p>I Infection</p> <p>W Withdrawal</p> <p>A Acute metabolic</p> <p>T Traumatic injury</p> <p>C CNS lesion</p> <p>H Hypoxia</p> <p>D Deficiency of vitamins</p> <p>E Endocrine</p> <p>A Acute vascular</p> <p>T Toxins (including medications)</p> <p>H Heavy metals</p>	<p>D rugs</p> <p>E pilepsy/ Electrolyte imbalance</p> <p>L iver failure/ Low oxygen (MI, PE)</p> <p>I nfection</p> <p>Retention (urinary/ faecal)</p> <p>I ntracranial</p> <p>Uraemia</p> <p>Metabolism</p>	<p>Pain</p> <p>Infection</p> <p>Nutrition</p> <p>Constipation</p> <p>Hydration</p> <p>Medication</p> <p>Electrolytes</p>
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Drugs may cause or prolong delirium.

- ▶ Analgesics – NSAIDs, Opioids
- ▶ Antibiotics – e.g. fluoroquinolones
- ▶ Anti-cholinergics
- ▶ Anti-convulsants
- ▶ Anti-depressants, e.g. mirtazapine
- ▶ Anti-hypertensives
- ▶ Anti-spasmodics (MSK) – e.g. cyclobenzaprine
- ▶ Anti-spasmodics (GI) – e.g. dicyclomine
- ▶ Corticosteroids
- ▶ Hypnotics – Barbs & Benzos



Prevention is not always possible, but we can try!

DELIRIUM: TOP TIPS

1. LOOK CAREFULLY FOR DELIRIUM

PINCHME
Pain
Infection
Constipation
Hydration
Medication
Environment

Then use the **4AT** to help diagnose delirium
www.4at.com

SLEEP DEPRIVATION
makes delirium worse.
Encourage good sleep hygiene.

GLASSES?
Put them on!

ASK ABOUT ALCOHOL

HEARING AIDS?
Put them in (batteries)

2. HARNESS THE POWER OF THE FAMILY

LISTEN to family/friends/carers who tell you the patient is confused

ALLOW open visiting & family photos at bedside.

MINIMISE ward transfers (and document all that)

3. FIND/STOP CULPRIT MEDS

STOP

- Anticholinergics
- Opioids
- Benzodiazepines
- Sedatives
- Antipsychotics
- Antidepressants
- Beta-blockers
- Diuretics
- Insulin
- SGLT2 inhibitors
- Statins
- Tylenol
- Z-drugs

ASK at least one of the following questions:
• Have you started any new medicines?
• Have you changed the dose of any medicines?
• Have you stopped any medicines?

4. ORIENTATE YOUR PATIENT

IF YOU REALLY HAVE NO CHOICE BUT TO PRESCRIBE MEDICATION TO MANAGE DELIRIUM, ORIENTATE ON DELIRIUM

Use the 4AT to identify delirium, and consider the following:
• Orientation to person, place, and time
• Attention
• Consciousness
• Communication
• Cognition
• Cognition
• Cognition

How do we treat delirium?
Fix the glitch!



WE FIXED THE GLITCH
SO IT'LL JUST WORK ITSELF OUT
NATURALLY.

Thank you! 😊

Questions?

Sources

- ▶ UpToDate: "Diagnosis of delirium and confusional states"
- ▶ UpToDate: "Prevention, treatment, and prognosis of delirium..."
- ▶ United Health Network: "Delirium Prevention and Management"
