Quick Reference Guide

Authors

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Chapter 1

Delirium

1.1 Delirium

Organic cerebral syndrome also referred to as an 'acute confusional state' and characterized by the presence of the following:

1. Impairment of consciousness and attention
2. Global disturbance of cognition
3. Psychomotor disturbance (HYPO OR HYPER-ACTIVE)
4. Disturbance of sleep-wake cycle
5. Emotional disturbance

Note: For definite diagnosis of delirium, symptoms of all of the above should be present *however mildly*. Delirium is common (20% hospital patients at some point during their admission).

1.1.1 Common causes

infection (commonly chest or urine); fever; iatrogenic (particularly pain medication e.g. opiates); dehydration; electrolyte disturbance; anaemia; drug or alcohol withdrawal or intoxification; renal or hepatic illness; major surgery; epilepsy; head injury or infection; terminal illness; constipation; being in an unfamiliar place….

Delirium classically presents as *acute* in onset with *fluctuating* course, *clouding of consciousness*, poor short term memory and inattention (as opposed to *dementia* which is *insidious* in onset, steadily *progressive* in course and *in clear consciousness* until later stages).

1.1.2 Delirium subtypes

- hyperactive (increased motor activity with agitation, hallucinations and inappropriate behaviour)
- hypoactive (reduced motor activity and lethargy)
- mixed (features of hyper and hypoactive delirium)?**

Hyperactive delirium

With HYPERACTIVE delirium, a patient can become aggressive, violent and agitated with those around them. They may hear things, can become paranoid, and they are overall confused. Delusional thoughts are common. In these instances a delirium may be confused with something like *schizophrenia*.

Hyperactive delirium symptoms

- **Waxing and waning—**it comes and goes
- **Issues with concentration**
- **Pulling out medical lines**
- **Yelling profanities**
- **Throwing things**
- **Agitated**
- **Responding to things in the room that aren't there**
- **Not acting like themselves**

Hypoactive delirium

Warning! **HYPOACTIVE** delirium is often missed

Because the presentation is much less dramatic compared to hyperactive delirium. People with hypoactive delirium are confused and disoriented, but they are NOT pulling out their lines, yelling, or physically restless. In these instances, symptoms of hypoactive delirium may be confused with *depression* or *cognitive decline*.

Hypoactive delirium symptoms

- Slower movement
- Softer speech
- Slower responses
- Withdrawn
- Not eating as much

In both schizophrenia and depression onset is distinct to delirium in terms of onset and course which is *variable* (although note there is diurnal variation in depression with low mood tending to be worse in the early morning) with NO clouding of consciousness (although psychotic patients can appear perplexed which should not be confused with this). Psychotic symptoms where arising are COMPLEX and SUSTAINED in these patients. This is in contrast to 'psychotic' symptoms in delirium which are COMMON and tend to be SIMPLE and FLEETING.

1.1.3 Screening for delirium

- Does the person know who they are?
- Does the person know where they are?
- In what detail does the person understand where they are?
- Does the person know the date?
- Can they orient to the situation? Do they know why they are there and the circumstances that led to them being in the hospital?
- Can they repeat back a few words? Ask them later if they remember the three words asked previously).
- Test for concentration: like asking the days of the week in reverse order.
- Assess visual and spatial ability e.g. ask them to draw a clock to look for spacing, impairments, or difficulties. Some tests that are common to determine delirium are:
  - The Mini Mental Status Exam (MMSE)
  - The Montreal Cognitive Assessment (MOCA)
  - 4AT

1.1.4 Management

Warning! DELIRIUM IS A REVERSIBLE MEDICAL EMERGENCY.

PREVENTION (from developing and from worsening) is the most effective strategy for reducing frequency and complications.

1. **Treat underlying medical or organic cause(s) (if identifiable)**
2. **Minimize contributing factors**
3. **Review medication list for precipitants (opioids, antihistamines, anticholinergics, benzodiazepines, drug toxicity)**
4. **BEHAVIOURAL INTERVENTIONS** (should be used BEFORE considering medication):

- Environment: is their bedspace well-lit? Would they benefit from a side-room?
- Close observation: may require 1:1 RMN or HCW ?risk of falls or wandering
- Social interaction and reassurance: explain patient what has happened, and why are confused. Reassure them that they are safe. Allow familiar items from home around the bedside and friends and family to visit.
- Frequent reorientation: Help them to know what time it is and where they are - a large clock and a written message about where they are can be helpful.
- Correct sensory impairments: Making sure that someone has their glasses and hearing aids – and that they are working!
- Restore sleep/wake cycle: *Lights on during day; Window shades open during day; Prevent daytime napping; Lights off at night; Minimize night time sleep disruption; Optimize Nutrition and monitor bowels*
- Physical Therapy: *Encourage ambulation; Get the patient out of the bed*

5. **PHARMACOLOGICAL INTERVENTIONS:** General Considerations-

- Should only be used for acute management of agitation or severe psychosis, where behavioural interventions fail. **USE ONE DRUG AT A TIME.**

- Use lower doses of medications for elderly and those with pre-existing cognitive, renal or liver impairment and/or neurological disease.
- ECG: Check QTc PRIOR to administering antipsychotic medications and renal/liver function to guide dosing.
- Avoid high potency antipsychotics in elderly patients; Parkinson's patients; Lewy Body Dementia (DLB); patients with history of EPS or NMS
- Monitor for akathisia, EPS, other side-effects – review regularly
- TITRATE according to response (*Start low (dose) and go slow (titrate)*)
- **Consider :**
- **FIRSTLINE **
- **1. Haloperidol 0.5-1mg PO/IM up to QDS (max. 4mg daily; peak effect 4-6hr (oral) or 20-40min (IM)) adjusted according to response **

  ***- avoid in DLB/Parkinson's/NMS/history of serious cardiac disease

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***- must have normal baseline ECG ***

-monitor for extrapyramidal and cardiac side-effects

- **2. Olanzapine 2.5 – 5mg PO max BD (20mg daily or 10mg in elderly)**
- **SECONDLINE: Promethazine 25mg up to QDS (max 100mg daily) OR Quetiapine 12.5 - 50 up to QDS (max 200mg daily) OR Risperidone 0.25
  - 1 OD-QDS (max. 4mg daily).**
- **Benzodiazepines**: use in patients with alcohol withdrawal; benzodiazepine withdrawal; catatonia; stimulant/hallucinogen intoxication; NMS; serotonin syndrome; Parkinson's; DLB (otherwise best avoided and avoid long-acting benzos e.g. diazepam where possible); where antipsychotic contraindicated.

- **Lorazepam 0.25 - 1 QD to QID 4 mg PO/IM (Remember risk of respiratory depression in some cases – consider flumazenil PRN).**

Chapter 2

Rapid Tranquilisation

2.1 Rapid Tranquilisation Guidance

The aim of pharmacological management of agitation is calm the patient not to sedate them. It should only be used when non-pharmacological measures have been tried and if appropriate non-pharmacological measures should continue reduce the level of sedation needed. Rapid Tranquilisation should be used only when there is risk to self or others or of damage.

2.1.1 Steps

1. Behavioural steps
2. Oral Medications
3. IM Medications
4. IV Medications
5. Seek expert advice

2.1.2 Behavioural techniques

- Time outs, allowing time and space for patients to settle
- Engagement with staff to allow patients to air their issues
- Offering distraction for example music
- While medications take time to kick in and produce a transient improvement behavioural techniques can work immediately to de-escalate

the situation, they also build trust with the patient and work better over time!

2.1.3 Medications

- General principle is oral is preferred over IM unless acute risk due to better safety for staff and patient.
- **Optimise regular medications.** So RT isn't being relied on.
- **Avoid mixing antipsychotics.** Due to increased risk of side effects.
- **Check interactions for medications especially if you are unfamiliar with them** (interaction of Quetiapine with strong CYP3A4 inhibitors such as Clarithromycin can be fatal).
- **Do not give IM Olanzapine within 2 hours of IM Benzodiazepines** due to risk of fata respiratory depression, particular concern given to those who may be under the influence of alcohol.
- **Use lower doses in children, the elderly, those with pre-existing reduced cognitive functioning (e.g. dementia, intellectual disabilities and delirium) **

Oral and IM medications

Sedatives Preferred for most patients especially if they are already on a regular antipsychotic

- Lorazepam 1-2mg can be given up to 1 hourly up to 4mg per 24 hours (PO/IM)
- Promethazine 25-50mg can be given up to 1 hourly up to 100mg per 24 hours (PO/IM)

Antipsychotics If the patient is not on regular antipsychotic

- Olanzapine 10mg
- Risperidone 1-2mg
- Quetiapine 50-100mg
- Haloperidol 5mg (can be combined with promethazine 25mg) -- **Last resort due to risk of arrhythmia and monitoring requirements**

IV Medications

Intravenous sedatives have markedly higher risk of respiratory depression and should only be used if risk of not managing agitation acutely is significant.

Diazepam 10mg over a minimum of 2 minutes, this can be repeated in 5-10mins if inadequate response.

Should only be given if the risk of over sedation can be managed. Have respiratory support available (e.g. BVM) and flumazenil to hand.

Monitoring

The risks with pharmacological treatment can be separated into two types; those primarily a result of sedation; and those unrelated to the tranquilisation. Sedation risks are respiratory depression which can be fatal, falls and paradoxical agitation. Other risks with antipsychotics include arrhythmia (particularly torsade de point due to QTc prolongation), neuroleptic malignant syndrome, parkinsonianism and oculogyric crisis.

- Temperature
- Pulse
- Blood Pressure
- Respiratory rate

Monitor the above every 15 minutes for 1 hour until the patient is ambulatory. If not possible (due to refusal or contraindicated due to patient behaviour) observe for signs of pyrexia, hypoxia, hypotension, over sedation and general wellbeing.

ECGs are required for any patient on Haloperidol, and recommended for every antipsychotic particularly at higher doses.

2.1.4 Bibliography

- TAYLOR, D., BARNES, T. R. E., & YOUNG, A. H. (2018). *The Maudsley Prescribing Guidelines in Psychiatry 13th Edition.* Wiley & Blackwell. ISBN: 9-781119-442608 p60-61 and elsewhere.