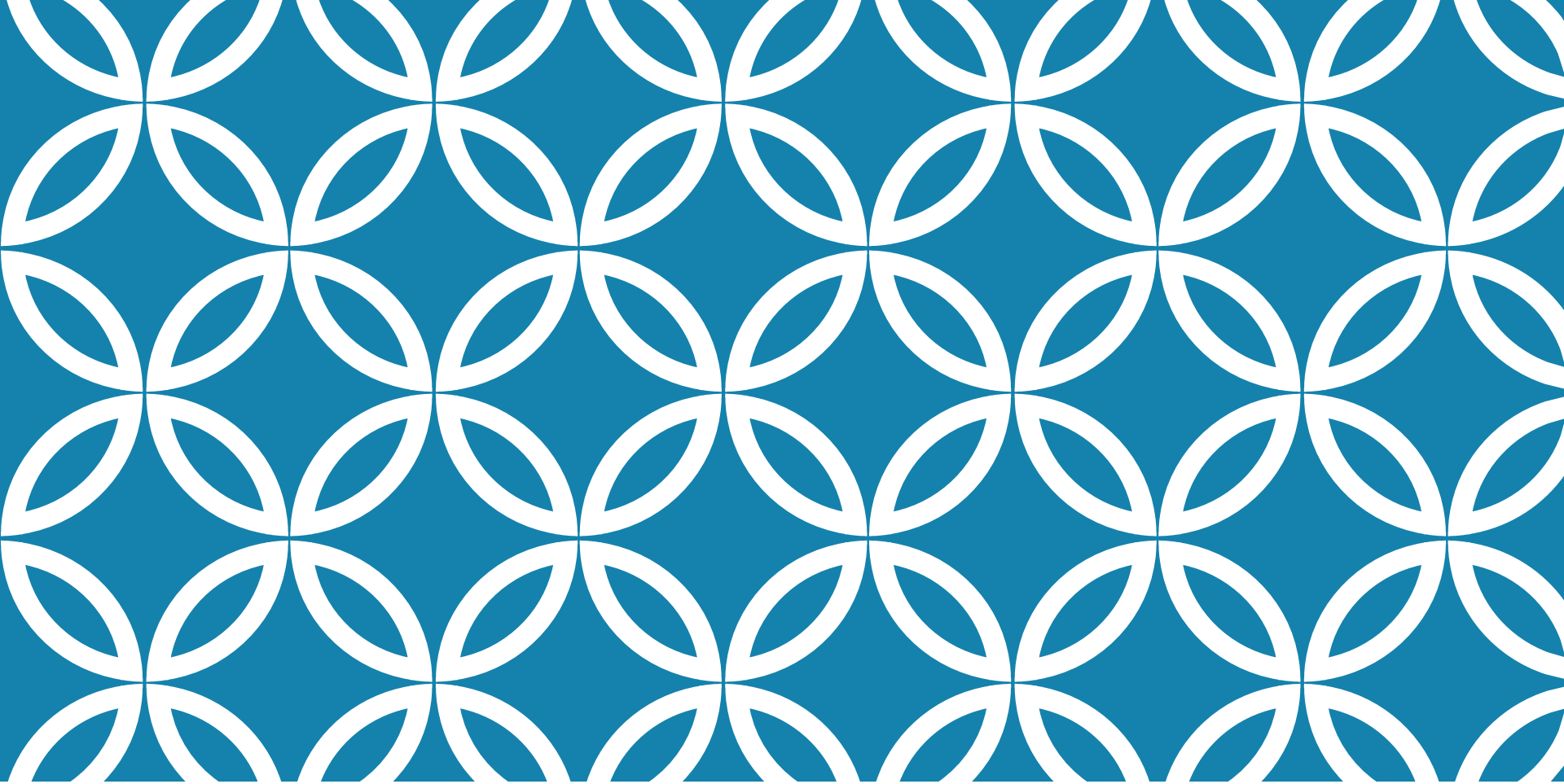


# Agitation and Delirium

Drs Alistair McKeown /Keeley

# OUTLINE

To discuss a case and reflect on the lessons learned

To look at the evidence around the management of distress at the end of life

To discuss the current guidance around the management of agitation and delirium at the end of life

# MR C

62 yo man diagnosed in mid-May 2022 with Stage IVa NSCLC

Admitted acutely with chest pain and breathlessness;

large L pleural effusion n drained to dryness and pleurodesed with

plan for referral for SACT after discharge;

# MR C

Referred to the HSPCRT: Pain, SOB, anxiety

Increased MST to 15mg BD from 10mg, on 5mg PRN oramorph. States in a lot of pain.

On 2mg diazepam TDS for anxiety. Patient states experiencing panic attacks after diagnosis.

# MR C

Mixed nociceptive/pleuritic pain which settled with careful titration of analgesia – MST 30mg bd; slow progress post pleurodesis;

extremely fatigued by even minimal exertion;

# MR C

Began to look increasingly unlikely that he was going to be fit for SACT and discussion proceeded along these lines;

explored going home;

ward referred to clinical psychology and patient explored issues of childhood and adult  trauma;

# MR C

W/b  began to explore the possibility of going home ; OT/PT referral and began planning discharge with patent and his wife

Reviewed patient with sons (early 20s) and explained unlikely to get SACT and dc home is for EOLC;

# MR C

Became less well the weekend of 17/18th; increasing breathless and agitated and required increasing doses of oxycodone prn and midazolam; advice sought re csci;

On 19th started csci of Morphine 50; midaz 15; hyoscine BuBr 120

# MR C

Worsening agitation; some hypnogogic hallucinations

20th csci of oxycodone 45; midaz 30; hyoscine BuBr 120 (increases in line with prn use)

21st csci of oxycodone 60; midaz 50; hyoscine BuBr 120 (increases in line with prn use); started levomepromazine 10mg bd sc

Overnight on the 21st – increasing use of midazolam

# MR C

By the following morning, Mr C died with his wife by his bedside.

# ISSUES/LEARNING POINTS

Left with a uncomfortable feeling that we hadn't managed his symptoms as well as we could have.

Management of agitation – higher doses sooner – hadn't explored the issues around tolerance and previous drug use – unresponsive to benzodiazepines – other drugs to use.

Ward had referred for clinical psychology input – could this have been done earlier?

What were the causes of his agitation? What did we need to consider?

# WHAT ARE THE POSSIBLE CAUSES OF CONFUSION / AGITATION?

**Extensive!**

**CNS**: Primary brain tumours; metastatic spread to the CNS;

**Metabolic causes**:

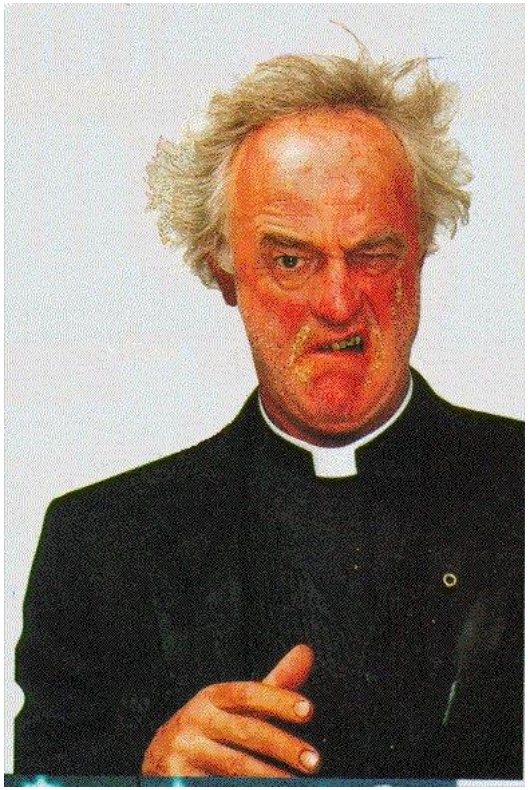
Organ failure (e.g. hyperbilirubinaemia, uraemia);

Electrolyte disturbance (e.g. hyponatraemia, hypercalcaemia); hypoxia;

**Social/spiritual elements**

**Environmental factors**

- Drug or alcohol dependence
- Drug or alcohol withdrawal



# HOW APPROPRIATE / HELPFUL ARE THOSE TERMS?

Delirium

Confusion

Agitation

Hyperactive/hypoactive

# DELIRIUM

Delirium is defined as a non-specific, global cerebral dysfunction with concurrent disturbances of consciousness, attention, thinking, perception, memory, psychomotor behaviour, emotion, and the sleep-wake cycle.

- *American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders 4th Edition (DSM-IV) Washington DC American Psychiatric Association., 1994*

# DELIRIUM

Part of a wide range of organic mental disorders, which includes dementia, organic mood disorder, and organic anxiety disorder.

Like dementia, is marked by a general cognitive impairment whereas in other organic mental disorders impairment is more selective.

Is distinguished from dementia in that delirium is deemed to be, at least potentially, reversible.

# DELIRIUM CONT.

20% of all hospital admissions

30% - 85% admissions to palliative care unit

50% of delirium towards end of life may be reversible

50% of patients remember being delirious

Risk factors – dementia, age, comorbidities, sensory impairment, immobility

3 types

- Hypoactive
- Hyperactive
- Mixed

# HYPOACTIVE DELIRIUM

Least recognised

Sudden onset

Sluggish and lethargic

Fluctuating level of consciousness

Misdiagnosed as depression

Calm, cause no trouble

Bedsores, PEs, poor prognosis

Poorly understood/treated

# HYPERACTIVE DELIRIUM

Most commonly recognised

Sudden onset

Hyperactive, agitated

Disruption of sleep pattern/cognitive function

Disruptive on ward/home/hospice

More likely to be called about!

# AGITATION

HUGE topic

Complex and unpleasant symptom

Spectrum from mild anxiety → terminal agitation

Poor control of delirium leads to:

- Poorer pain control
- Increased morbidity
- Shorter life expectancy
- Increased distress to patient/family/carers

# HOW DO WE ASSESS PATIENTS WITH THESE SYMPTOMS?

In practice;

MMSE

4AT tool

TIME checklist

# WHAT CAUSES AGITATION AND DELIRIUM?

Pain

Infection

Constipation

Urinary retention

**Opioid Toxicity**

**Benzodiazepines**

Drug withdrawal

Alcohol withdrawal

Nicotine withdrawal

CVA/TIA

Hypoxia

Renal failure

Hepatic failure

Hypercalcaemia

Spiritual

Emotional

"Housekeeping"

**Steroids**

Hypoglycaemia

Non-convulsive status

AND LOTS MORE!

# CHIMBOP!

C = Constipation

H = hypovolemia, hypoglycaemia

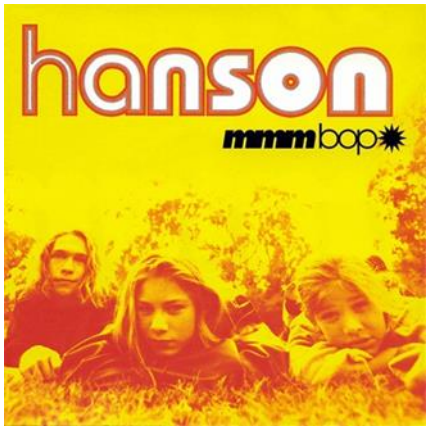
I = Infection

M = Medications

B = Bladder catheter or outlet obstruction

O = Oxygen deficiency

P = Pain



# SOCIAL/SPIRITUAL ISSUES

Also important

Identification can prevent problems

Unresolved issues “come to a head”

Can be as simple as a Will

Or as complex as a broken family

Time consuming

Use resources

Chaplains, Social Work, ICJ

# TERMINAL AGITATION

A state of agitated (hyperactive) delirium

No reversible causes

Distinct patterns

Can't get comfortable, getting up and down, non specific complaints etc

Once seen, rarely forgotten

V. distressing for families, patients, carers

Spiritual/emotional distress

# WHAT SORT OF INVESTIGATIONS NEED CONSIDERED?

- Keep it simple
- Tailor to goals & the situation
- Will it make a difference to management
- U&E; Ca; FBC; infection screen; CT head
- Acute/chronic?
- Review medicines

# MANAGEMENT

Depends of aetiology and patient

Identify and treat reversible causes

Consider social/psychological issues if appropriate

Catheter, bowels, infection, symptoms

Opioid rotation/medication reduction

Hydration

Do you need to consider AWI?

Introduction of medications where appropriate

# ASSESSMENT

Consider physical and psychosocial factors is essential.

Consider the possibility of existential distress

The patient's capacity should continue to be assessed to ascertain if they can decide on further management - /need for AWI

# MANAGEMENT

Consider all reversible causes inc alcohol, nicotine and drugs

Focus on patient and family and spiritual issues.

Involve appropriate members of the multidisciplinary team (MDT) (for example those with rapport with patient and family, chaplain) to explore unresolved issues.

(other strategies)

# IN PRACTICE

Scottish Palliative Care Guidelines

https://rightdecisions.scot.nhs.uk/

# MEDICATIONS - HALOPERIDOL

Typical antipsychotic

Specific D2 receptor antagonist

Start with 0.5mg stat & o.n. in the elderly

Younger patients may need higher doses

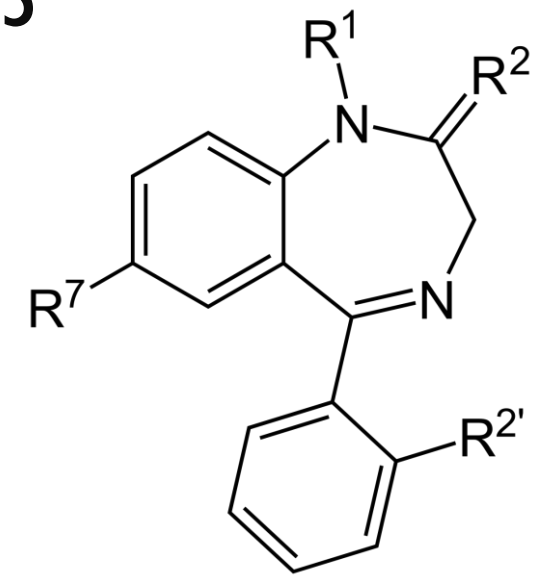
Use lowest effective dose – 500mcg to 3mg PO, 2mg SC

Consider adding benzo if no response

Not in PD. ?? Seizures.

**Best for hallucinations/psychotic features**

# MEDICATIONS - BENZODIAZEPINES




Anxiolytic sedative

Reduce anxiety and aggression

DO NOT improve cognition

Sedate and improve sleep

Relax muscles

Better for agitation where anxiety symptoms dominant

**Best for when anxiety/agitation predominant symptoms**

# BENZODIAZEPINES CONT

**Midazolam**

- Short acting
- 3x more potent than diazepam
- Plasma half life extended in elderly
- Accumulates in severe renal impairment
- Water soluble and good compatibilities
- Buccal/PR route
- Increased risk of # in elderly
- Usual starting bolus 2-5mg
- Usual starting CSCI 5-10mg
- Range – useful up to 60-80mg/24hrs (lower?)
- Potential for paradoxical agitation
- Disinhibiting (like alcohol)
- Loraz/diaz/clonaz

# MEDICATIONS - LEVOMEPROMAZINE

Phenothiazine antipsychotic, antiemetic

Typical antipsychotic drug

Antagonist at D2, H1, α1-adrenergic and muscarinic receptors

Usually patients at EOL

Frequently reduces conscious level

- Stat dose 2.5-25mg SC
- 25–75mg/24h CSCI
- Maximum 300mg/24h

**Best in combo with benzos in terminal agitation**

# MEDICATIONS - PHENOBARBITAL

**With Specialist Support only**

Anti-epileptic

For use in Palliative sedation in the imminently dying

Fail to respond to combined use of midaz and antipsychotic

Irritant injection stat doses are generally given IM/IV

Start with loading dose of 50-200mg

Maintain with 200-800mg/24h CSCI

Max usually 2400mg

# MANAGEMENT

- Continuous deep sedation
- Reserve for those in the final hours or days of life
- Suffering is unbearable and refractory to standard treatment.
- Seek specialist advice if considering continuous sedation.
- Ethical considerations

# MANAGEMENT

Environmental – **very** important in delirium

One to one nursing where possible, constant staff

Safe environment, hearing aids, glasses etc.

Well lit, quiet

Reassurance from family and nursing staff

Address fears/concerns/issues - if appropriate and helpful

Medications – only if required

Review and remove if patient recovers

Following based on **Scottish Palliative Care Guidelines**

# CASE STUDY

54 year old man

Acute receiving unit

Known metastatic bowel cancer (Liver, lung)

Admitted to hospital with confusion

Agitated, uncomfortable

What do we do?

# CASE STUDY CONT

History and examination

Quick deterioration on background of slow decline

No Hx of cognitive issues

Increasing pain

CXR – New and progressive metastatic disease

WTU - +VE +++

Bloods – $Ca^{2+}$ 3.1

Action?

# CASE STUDY CONT

Treatment of hypercalcaemia and UTI

Improvement in condition over next few days – gets home

Good analgesia, new bone mets on on X rays

Remains tired, family concerned

Slow deterioration continues

Several discussions about prognosis, decline, chaplaincy

Emotional turmoil becoming more pronounced

What next?

# CASE STUDY CONT

Family discussions planned at home

Small amount of midazolam added to CSCI

Ongoing deterioration

Called to see patient

Agitated, confused, difficult to understand

Complaining of pain, nonspecific

Increasingly difficult to manage at home

Hospice admission arranged

# CASE STUDY CONT

Examination – urinary retention

Recent bloods, no new infective symptoms or med changes

Catheterised – little improvement

Ongoing descriptions of pain

Now lashing out at nursing staff and family

Big guy – 4 nurses to keep him in bed

What next?

# CASE STUDY CONT


Titration of midazolam 10 → 30mg

Bolus of 5mg

Short period of improvement (2hrs), further bolus

Increasing again → further titration 30 → 50mg

Add levomepromazine 25mg

Continued agitation despite titration to 80mg midaz, 200mg levo plus bolus.

Next?

# CASE STUDY

Phenobarbital 50mg stat IM

Good effect

Small CSCI 200mg – trouble siting due to oedema +++

Another 2hrs relief – winding up again

Concern about CSCI absorption – any other ideas?

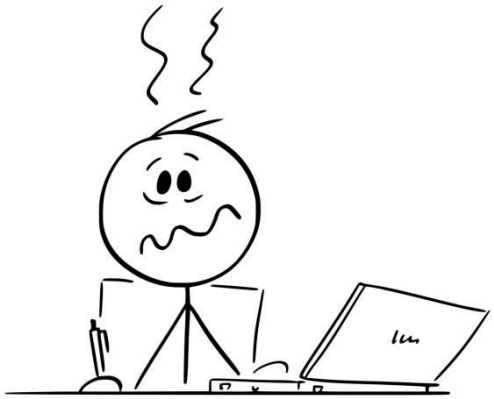
# CASE STUDY CONT

PR midazolam – excellent effect!

Pt passed away 8 hours later, very settled

? Cumulative effect ? Absorption issues

I went home to bed!



# SUMMARY

Good history and examination essential

Treat reversible causes (Physical/Social/Spiritual)

Are we making things worse? (Medications)

Recognising end of life situation and need for sedation

Judicious use of appropriate medications

Know where to get help

# QUESTIONS AND DISCUSSION