Delirium and Terminal Restlessness in Palliative Care

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Learning Objectives

- Define Delirium
- Identify at least 5 predisposing risk factors for delirium
- Identify the 5 independent risk factors for delirium at discharge
- Discuss clinical management of delirium in Palliative Care
- Discuss the management of terminal restlessness

Definitions

- Delirium
  - Acute decline in attention and cognition
  - Characterized by onset of fluctuating inattention and confusion
  - Linked to one or more “triggers”
- Terminal Restlessness
  - Clinical spectrum of unsettling behaviors in the last few days of life

Terminal Restlessness

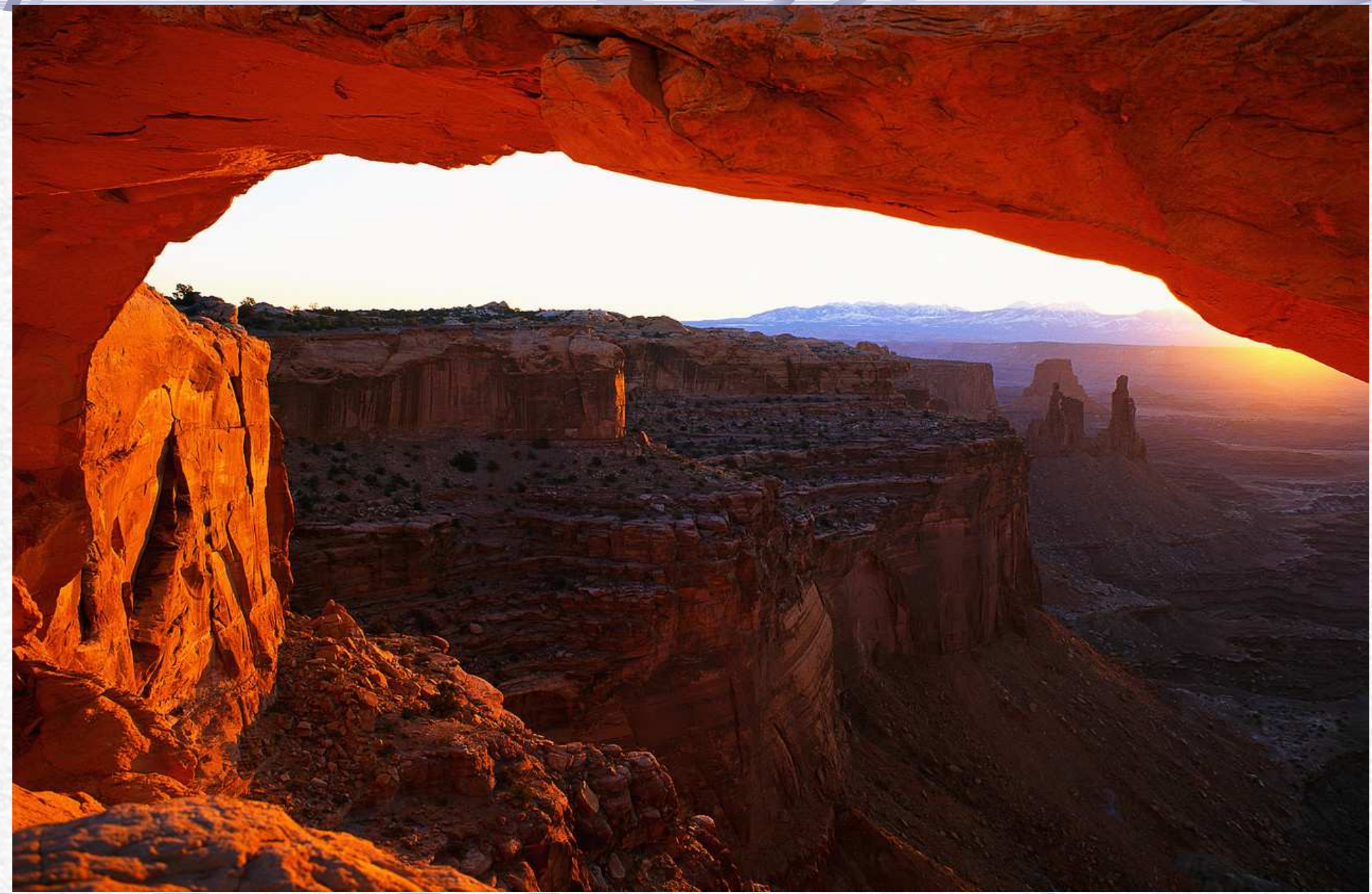
- Synonyms
  - Terminal agitation, terminal anguish, pre-death restlessness
- Symptoms
  - Irritability, anxiety, unease, distress, inattention, hallucinations, paranoia
- Signs
  - Restlessness, fidgeting, purposeless,yet coordinated movements, toss and turns, moans, groans, grimaces, tries to get out of bed

Terminal Restlessness

- More Signs
  - Jerks, twitches, myoclonus, confusion, picks at sheets, cognitive impairment, aggression
- Medications
  - Antisecretory agents, opioids, anxiolytics, antidepressants, antipsychotics, antiepileptics, steroids, and NSAID's

DSM IV Criteria

- Disturbance of consciousness with reduced ability to focus, sustain or shift attention
- Changed cognition or the development of a perceptual disturbance
- Disturbance develops in a short period of time and fluctuates over the course of a day
- History, P.E., and labs show that delirium can be a physiological consequence of general condition; caused by intoxication, medication or more than one etiology.



Epidemiology of Delirium

- Rates are highest among hospitalized older patients
- Prevalence:
  - Proportion of individuals in a population that have the disease at a given time.
- Incidence:
  - Frequency with which a disease appears in a particular population
  - Number of newly diagnosed cases during a specific time period.

Epidemiology of Delirium

- Prevalence at time of admission: 14-24%
- Incidence of delirium during admit:
  - 6-56% in general hospital pop.
  - 15-53% of older pts, post-op.
  - 70-87% in ICU's.
  - Up to 60% in N.H's.
  - Up to 83% at the end-of-life.

Epidemiology of Delirium

- Overall prevalence in commy: 1-2%.
  - Prevalence increases with age
  - 14% if > 85 y/o
- In 10-30% of elder E.D. pts:
  - Delirium may be only sx of a life-threatening illness
- Mortality rates in hosp. pts:
  - 22-76%
  - As high as MI or sepsis
  - 1 yr mortality rate is 35-40%
- Costs:
  - Medicare hospital costs in 2004 - $7B!
  - Total Cost Estimates on healthcare system: $38-152B!!

Predisposing Risk Factors

- Males
- Age $\geq$ 65
- Cognitive status
  - Dementia
  - Cognitive impairment
  - H/O delirium
  - Depression
- Functional Status
  - Dependence, immobility, low level activity,h/o falls
- Sensory Impairment
  - Vision
  - Hearing
- Dehyd/Malnut.
- Drugs
  - Psychoactive
  - NSAID's
  - Steroids
  - Opioids
  - Epilepsy meds
- Co-Morbidities
  - Stroke, CHF, MI
  - Sepsis, Trauma
  - Resp Failure
  - Renal Failure
  - Metabolic Abn
  - Terminal Illnesses
  - HIV/AIDS

Precipitating Factors

- Drugs: Sedative hypnotics, opioids, anticholinergics, alcohol/drug withdrawal, polypharmacy.
- Primary neurologic dz: stroke, esp in nondominant hemisphere, intracranial bleeding, meningitis, encephalitis.
- Surgery: Orthopedic, cardiac, prolonged cardiopulmonary bypass

Precipitating Factors

- Comorbid Illnesses: infections, iatrogenic complications, shock, hypoxia, fever or hypothermia, anemia, dehydration, low serum albumin, electrolyte and acid-base imbalances.
- Environmental: ICU admit, use of restraints, Foley caths, multiple procedures, pain, emotional stress, sleep deprivation.

Baseline High Risk Factors

- Age > 85 (2.5x higher)
- > 1 ADL Impairment (3x higher)
- Vision Impairment (3.5 x higher)
- Dementia (5x higher)
- APACHE II > 16 (60% higher)
- BUN/Cr $\geq$ 18 (70% higher)

Hospital-Related Risk Factors

- Restraint Use: (> 5x higher risk)
- Cath Use: (> 2x higher risk)
- Iatrogenic Event (> 2.5 x higher risk)
- Intercurrent Illnesses: (> 30% higher)
- Hospital Meds: (30% higher risk)

Clinical Delirium in Palliative Care

- Acute Onset
- Fluctuating Course
- Inattention
- Disorganized thinking
- Altered LOC
- Cognitive Deficits
- Perceptual disturbances
- Psychomotor disturbances
- Altered sleep-wake cycles
- Emotional disturbances

Palliative Care Settings

- Drugs
- Electrolytes or glucose abnormals
- Liver failure
- Ischemia or hypoxia
- Renal Failure
- Impaction of stool
- Urinary Tract or other Infections
- Metastases

Delirium Management

- Assessment
  - Maintain a high index of suspicion
  - Delirium can be only sx of life-threat illness
  - Use a screening tool (CAM of MMSE)
  - Ask about hallucinations, paranoia
  - Examine and look for signs of infection, opioid toxicity (myoclonus and hyperalgesia), dehydration, uremia, hepatic encephalopathy
  - Order approp labs: CBC, BMP, Ca, U/A, ABG's, CXR, Blood cult.

Delirium Management

- Family and Staff Education
  - Confusion and agitation: brain dysfunction, not always pain
  - Patients often have minimal or no recollection of symptoms
  - Treatment goal is comfort
  - Delirium superimposed on dementia
  - Urinary retention or stool impaction≠ agitated delirium or crescendo pain

Delirium Management

- Treat underlying Causes if possible –
  - Opioid toxicity: change to another narc
  - Sepsis: Start abx if within goals of care
  - Drugs: Stop, decrease or wean unnec drugs or offending drugs (tricyclics, benzo's)
  - Dehydration: May start hypodermoclysis or use IV site for gentle rehydration
  - Hypoxia: treat underlying cause, O2
  - Urinary Catheter: Consider removal
  - Restraints: Stop
  - N/G tubes: Discontinue

Delirium Management

- All Patients
- Nonpharmacologic:
  - Calm and comfortable environment (music)
  - Calendars, clocks, familiar home objects
  - Involve family members
  - Reorienting by family or staff
  - Limit room and staff changes
  - Allow patient an uninterrupted evening sleep time by limiting interruptions with v.s., blood draws
  - Open/close blinds appropriately

Delirium Management

- Nonpharmacologic:
  - Use of sitters – family/aide
  - Avoid catheters and restraints
  - Use music, massage, relaxation meditation
  - Use of eyeglasses, hearing aides, interpreters
  - Maintain mobility
  - Normalize sleep cycle

Terminal Delirium Management

- Patients with severe agitation
  - High risk of interfering with essential medical care (mechanical ventilation)
  - Pose safety hazard to self, family, staff
- Pharmacologic Management
- Explore Psychosocial Issues
- Explore Spiritual Issues

Terminal Restlessness Management

- Stop unnecessary meds
- Stop offending meds
- Create a peaceful and reassuring environment
- Music Therapist
- Pharmacology

Terminal Restlessness Management

- Pharmacologic Management
  - Haldol: usual agent of choice, RCT proof
    - 0.5 to 1 mg p.o. every 12 hours
    - Additional dose every 4-6 hrs for breakthrough
    - EP side effects in doses > 3 mg/day
    - Prolonged corrected QT interval
    - Avoid IV use due to short duration of action
- AVOID IN THESE PATIENTS:
  - Withdrawal from alcohol, drugs
  - Neuroleptic malignant syndrome
  - Liver failure

Terminal Restlessness Management

- ATYPICAL Antipsychotics-Risperidone, Olanzapine, Quetiapine:
  - Avoid use due to increased mortality in older patients with dementia
  - Tested only in small uncontrolled studies
  - EP side effects
  - Prolonged QT interval on ECG

Terminal Restlessness

- Lorazepam Use:
  - Second Line Agent
  - 1-2 mg p.o., S.L., or IV every hour for severe restlessness until calmer; less severe sx – every 3-4 hrs, PRN.
- Versed Use:
  - 0.4 – 4 mg/hr continuous SC

Summary

- In the elderly, delirium is often a harbinger of serious life-threatening illness.
- Delirium has a high mortality rate.
- As clinicians, we need a high index of suspicion when seeing a "confused" pt.
- There are effective tools for dx and tx.
- Terminal delirium can be confused with symptoms of underlying illness or blamed on opioids.
- Opioids may need to be changed.

Summary

- Consider nonpharm. tx first.
- NO RESTRAINTS!
- Don’t use atypical antipsychotics.
- Don’t forget about existential suffering.
- Don’t forget the family as a resource!
- Don’t forget to support the family and staff!