

Delirious About Delirium?



Presented by:
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HPNA Approved Educator

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Mr. S is a 64 y.o. admitted to your hospice with a diagnosis of lung cancer with metastasis to the bone. Normally he is AO X 3 and appropriate. His wife calls the on-call nurse at 3 a.m. to report that he has not slept all night, keeps trying to get out of bed, does not seem to understand what she is saying because "he is not paying any attention to me when I talk" and he keeps taking his night clothes off.

What is wrong????

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Objectives

- Define Delirium based on clinical symptoms, pathophysiology, incidence and outcomes.
- State 4 reversible causes and interventions to alleviate symptoms.
- Identify at least one tool used to assess for Delirium

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- Delirare “to rant or become crazy”
- First reported by Hippocrates in 1813
 - Described as a “fatal sign”
 - Noted different variants, agitated and lethargic
- Has been studied for almost 200 years.



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Epidemiology

- Frequency
 - 14-56% of elderly hospitalized patients
 - 20-22% elderly at the time of admission
 - 10-30% additional cases develop after admission.
 - 40% of ICU patients
 - 5-10% after surgery; as high as 45% of orthopedic surgeries
 - **80% develop delirium near death.**

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- Mortality/Morbidity
 - 10-26% mortality rate for patients admitted with delirium
 - 22-76% mortality rates for patients who *develop* delirium in the hospital, with high rates of death in months following discharge
- Age
 - Can occur at any age but elderly and those who have compromised mental status.
 - Can occur on top of an underlying dementia

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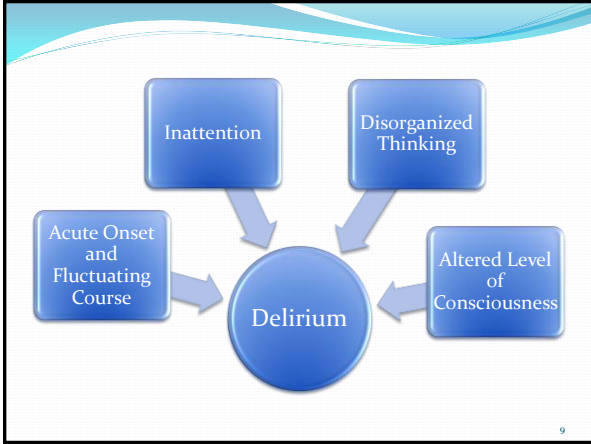
Definition and Diagnostic Criteria

Delirium is the acute onset of impaired cognition, attention, consciousness, perception, sleep-wake cycle or emotional states that fluctuate over the course of the day.

DSM-IV Criteria

1. Disturbance of consciousness (awareness of environment) and reduced attention
2. Change in cognition or perception (not related to patient's dementia);
3. Acute onset (hours to days), fluctuating course;
4. Evidence from H&P or lab value of medical cause.

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Subtypes of Delirium

Hyperactive	Agitated Restless Pulls tubes and lines May hit, bite, kick, spit Emotionally labile
Hypoactive (often confused with depression)	Apathetic Withdrawal Lethargic Decreased LOC
Mixed	Concurrent or sequential occurrence of hyper and hypo active behaviors. Highest morbidity/mortality

	Delirium	Dementia	Depression
Onset	Sudden	Gradual/Vague	Gradual
Presentation	Varies	Gradual	Evident early
Cognition	Disoriented	Disoriented	Subjective
Symptoms	Worse at night	Worse in evening (Sun downing)	Early morning
LOC	Normal	Fluctuates	Normal
Sleep pattern	Sudden change	Often disturbed	Early waking
Mood	Emotionally labile	Possible labile	Unhappy
Speech	Changed Rate	Difficult	Normal
Delusions or hallucinations	Rare	Rare	Rare
Psychomotor disturbance	Evident	Evident late stages	Evident in severe depression

Risk Factors

<p>Not Modifiable</p> <ul style="list-style-type: none"> • Advanced Age • Gender (Male) • Living at home • Smoking • ETOH • Malnutrition/dehydration • Chronic Pathology <ul style="list-style-type: none"> • Cardiac • Neuro • Pulmonary • Metastatic disease • Long term cognitive illness 	<p>Modifiable</p> <ul style="list-style-type: none"> • Environment <ul style="list-style-type: none"> • ED admit • Transfers • Isolation or open unit • No clock/No daylight • Sleep deprivation • Absence of glasses/hearing aids • Acute Illness <ul style="list-style-type: none"> • Length of stay • Restraints • Metabolic/electrolyte • Severity of illness • Tubes/catheters • Type/number of meds
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Drugs

- Opioids
- Antisecretory
- Anxiolytics
- Antipsychotics
- Antidepressants
- Steroids
- NSAIDs

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What are the effects of Delirium?

- High mortality
- Causes distress for the family and the patient.
- Poor patient/family satisfaction outcomes
- Patients who have had their delirium reversed can remember the experience and this causes distress
- Prolonged hospital stays
- Increased complications,
- Increased cost
- Long-term disability

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Pathophysiology

- Imbalance in Neurotransmitters
 - Increased Dopamine-Excitatory
 - Decreased Acetylcholine (Ach)-Depressant
- Other factors:
 - Increased GABA Activity
 - Decreased GABA Activity
 - Decreased Serotonin
 - Increased Serotonin

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Assessment Tools

- Bedside Confusion Scale
- Clinical Assessment of Confusion A & B
- Clock Drawing Test
- Cognitive Test For Delirium
- **Confusion Assessment Method (CAM) and CAM-ICU**
- Confusion Rating Scale
- Confusion State Evaluation (CSE)
- Delirium Assessment Scale (DAS)
- Delirium Index (DI)
- Delirium Observation Screening Scale (DOS)
- **Delirium Rating Scale-revised-98 (DRS)**
- Delirium Scale
- Delirium Severity Scale (DSS)
- Delirium Symptom Interview (DSS)
- Delirium Symptom Interview (DSI)
- Delirium-O-Meter (DOS)
- Delirium Writing Test
- Memorial Delirium Assessment Scale (MDAS)
- **Mini-Mental State Examination**
- **NEECHAM Confusion Screening Scale (NUDsc)**

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Screening tools

- Mini-Mental State Examination
 - Most frequently used
 - Assess orientation, instantaneous recall, short-term memory, attention, constructional capacities and use of language
 - Score of less than 24/30 indicates cognitive impairment.
 - Supported by research data
 - Use on admission to hospice or inpatient unit.

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NEECHAM Confusion Scale

- Designed for rapid and unobtrusive assessment and monitoring of acute confusion at the bedside.
- Detects changes in mental status as well as physiological and behavioral manifestations of delirium. (Hypo/Hyper active delirium)
- Score of less than 25/30 indicates presence of cognitive impairment.
- Repeated measures can be used to monitor changes in mental status.

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Diagnostic Instruments

- Confusion Assessment Method (CAM)
- Confusion Assessment Method-ICU (CAM-ICU)
- Delirium Rating Scale-Revised-98
- Delirium Symptom Severity Rating Scales
- Delirium Index

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Confusion Assessment Method (CAM)

- Assessment of the four core *DSM-IV* criteria
- Can be used by non-psychiatric clinicians in less than 5 minutes.
- Valid and Reliable
- Validated in the Palliative care as well as other healthcare settings.

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Delirium Rating Scale-Revised-98

- Delirium specific tool
- Revision of the Delirium Rating Scale (DRS)
- Contains 16 items
 - 3 diagnostic in accordance with the *DSM-IV*
 - 13 items severity based on common symptoms
- Total score maximum is 46 with severity score max of 39.
- Higher severity scores indicate increased delirium.

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History and Physical

- GOOD history and physical is very important!
 - Onset and course of symptoms
 - Previous function
 - Drug history, polypharmacy? Non-prescription medications? Herbs? Vitamins? Include it all.
 - History of alcohol use? When did they drink last? How often? What did they drink?
 - Smoking? How long? Last time they smoked? How many packs a day?
 - Underlying disease process?

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Diagnostics

- CBC
- Blood Chemistry
- Blood gases
- Blood, urine, or other cultures
- Serum drug levels
- Urine drug screen

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Look for the cause

- C** Constipation
- H** Hypovolemia, hypoglycemia
- I** Infection
- M** Medications
- B** Bladder catheter or outlet obstruction
- O** Oxygen deficiency
- P** Pain

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Interventions and treatment

- Manage the underlying cause.
 - Oxygen therapy for hypoxia
 - Treat infection if appropriate
 - Correct any metabolic abnormalities, if appropriate
 - Hypercalcemia-adequate oral or parenteral or SQ fluids
 - Hyponatremia-Encourage moderate alcohol intake, Demeclocycline, fluid restriction, possible inpatient admission for infusion therapy.
 - Physical discomforts, constipation, dyspnea, pain, pruritus
- Emotional discomforts, anxiety, depression and spiritual distress.

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- Modify medications
 - Limit anti-cholinergic drugs or decrease the number of drugs with anti-cholinergic properties.
 - Suspected opioid metabolite build-up, consider an opioid rotation and hydration.
 - Benzodiazepines-do not abruptly stop.
 - Steroids, taper to the lowest effective dose and do not discontinue abruptly.
- Treat any withdrawal syndrome, resume responsible drug and taper slowly.

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Pharmacological Interventions

- Neuroleptics
 - Haloperidol- First Line agent
 - 0.5-2 mg every 4-6 hours ATC/PRN
 - Chlorpromazine
 - 12.5 mg to 50 mg Q 4 to 12 hours ATC/PRN PO
 - 10mg to 25 mg Q 4-6 hours PRN IM
- Atypical Anti-psychotics
 - Risperidone
 - 0.25 mg to 1 mg PO 1-2 X daily
 - Zyprexa-2.5-5.0 mg qhs
 - Seroquel-25-50 mg bid

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- Benzodiazepines
 - Not recommended as first line treatment
 - Paradoxical effect
 - Increased sedation
 - Increased risk for side effects
 - Use with Haldol in patients with history of withdrawal syndromes.
 - Delirium tremens

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Palliative Sedation

- Chlorpromazine R/S- 12.5 mg to 50 mg PO, R, IM, IV
Q 4-12 hours.
Titrate to 600 mg/day if needed.
- Midazolam - IV or SQ
 - 0.5 to 2 mg bolus
 - 0.5 to 6 mg/hr. Titrate to 15 to 20 mg/hr
- Phenobarbital -IV SQ
 - 100-200 mg bolus
 - 600mg to 1200 mg/day , max dose 2500 mg/day
- Propofol
 - 2.5 to 5 mcg/kg/min
 - Titrate in increments of 10 to 20 minutes by 10 mg.
 - Maximum dose 200 mg/hr

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Helping the Family

- Core Themes
 1. The Multidimensionality of Suffering
 2. The Need for Communication
 3. Feelings of Ambivalence
 4. The need for Relevant information
 5. Valuing Sensitivity and Respect

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Prevention

- An ounce of prevention is a worth a pound of cure!
 - Recognize the risk factors
 - Family education
 - Use drugs cautiously-Start low and go slow!

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Thank you for attending,
Delirious about Delirium!

Have a safe trip home!

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- II. Epidemiology
- III. Definition/Criteria
- IV. Subtypes
- V. Three D's
- VI. Risk Factors
- VII. Drugs
- VIII. Effects of Delirium
- IX. Pathophysiology
- X. Assessment Tools
- XI. Screening Tools
- XII. Screening Tools

- a. Mini-Mental Examination

b. NEECHAM Confusion Scale

XIII. Diagnostic Instruments

a. Confusion Assessment Method (CAM)

b. Confusion Assessment Method-ICU (CAM_ICU)

c. Delirium Rating Sclae-Revised-98

d. Delirium Symptom Severity Rating Scales

e. Delirium Index

XIV. History and Physical

XV. Diagnostics

XVI. Find the cause

a. CHIMBOP

XVII. Interventions and treatment

XVIII. Pharmacological Interventions

XIX. Palliative Sedation

XX. Helping the family

XXI. Prevention