# Delirium in the Emergency Department

Emergency Medicine Rounds

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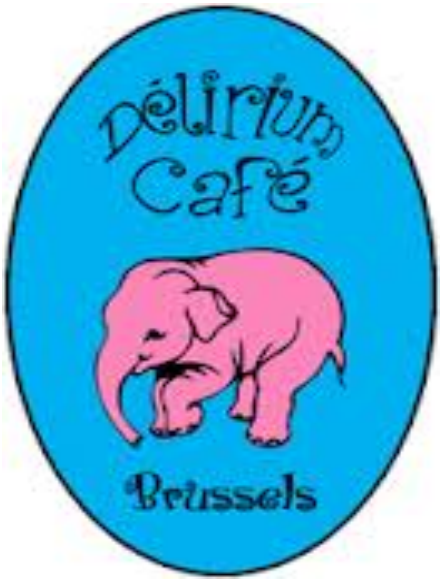
Paul R. Vanhoutte

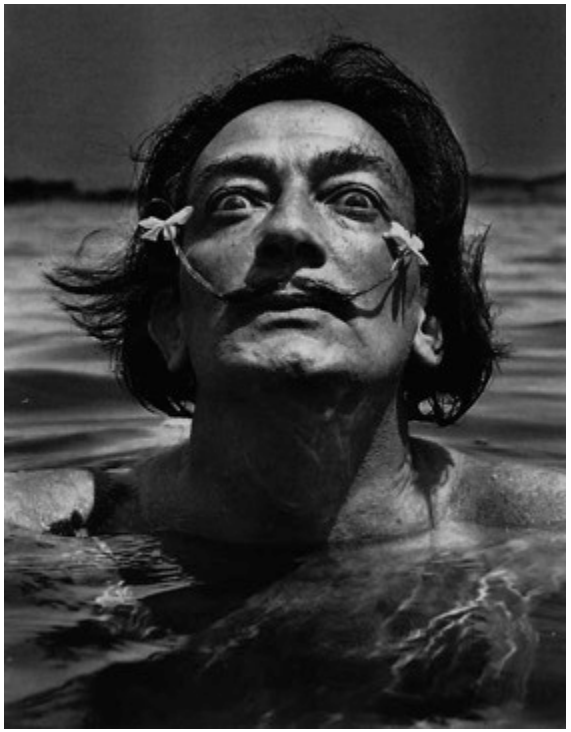
# Goals of Rounds:

- Review
  - Definition
  - Management
- An Understanding



# “What is important is to spread confusion, not eliminate it.”

* Acute Confusional State
  * Delirium
  * Dementia
  * Amnesia



# Delirium

* “an organic mental syndrome defined by a global disturbance of consciousness and cognition. It is characterized by a global cognitive impairment due to a medical condition…”

* Medical emergency requiring prompt evaluation and treatment

# The American Psychiatric Association DSM IV

* Four Key Features:
  * Disturbance of consciousness
  * Change in cognition or the development of perceptual disturbance
  * Short period of time
  * Clinical evidence

* Additional features

# In contrast…

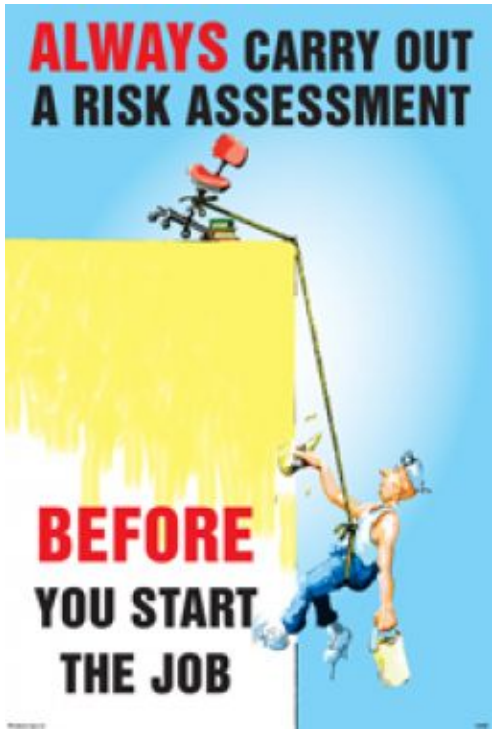
* dementia
  * Insidious
  * Progressive
  * Non fluctuating
  * Over months and years
  * Normal attention
  * Sun downing
* Psychiatric Illness

# Etiologies:

* Hypoxemia/hypercarbia
* Hypoglycemia/hyperglycemia
* Hypo/hypertension
* Electrolyte disturbances
* Infection/sepsis
* Dehydration, hypothermia, hyperthermia
* Alcohol/drug toxicity or withdrawal
* CNS lesion/trauma
* Endocrine- thyroid, adrenal
* Cardiac disease
* Medication/Vitamin B deficiency

* Risky Medications:
  * Anticholinergic( H1 receptors, Antiparkinson, Phenothiazine)
  * Antidepressants( Tricyclics, SSRI)
  * Benzodiazepines ( diazepam, alprazolam)
  * Opioids
  * Antibiotics( quinolones and macrolides)
  * NSAIDS( asa, ibuprofen, prednisone)
  * Barbiturates
  * Cardiac Meds: metoprolol, lisinopril, amlodipine, nifedipine, digoxin

* Risk Factors
  * Previous brain injury
  * Sensory impairment
  * Advanced age
* Precipitating Factors
  * Multiple home medications
  * Infection
  * Dehydration
  * Restraints
  * Catheters
  * Malnutrition
  * Nursing homes
  * Psychological stress



# Delirium by the Numbers

* 10-15% of total hospital admission
* 5-10% of ED visits for altered mental status
* More common in Caucasian race and females
* Hospital mortality is 25-33%
* Very young and the not so old( >60yrs)
* 30% of elderly experience during hospitalization
* High rates in ICU, older surgical patients, ED, hospice units
* Up to 70% missed rate
* 40% of patient dx with depression

# Patient

* Agitated
* Hallucinating
* Tremulousness
* Fantasies
* Delusions
* Lethargic/withdrawn
* Confused..
* Ect..

# Management

* In the ED, control the situation.
  * Medication- lowest dose possible
  * Restraints
* If possible, apply oxygen
* Early serum glucose
* Then, a comprehensive approach….

# History


* As per usual but ….
  * Observe
    * Distractibility
    * Language/speech problems
    * Disorientation
    * Short term Memory loss
    * Cannot shift attention/focus/follow commands
    * Perceptual disturbances
  * Disease/ recent illness( ie, epilepsy, alcoholism, mental illness, drug abuse
  * History of Trauma
  * Symptoms more severe in evening/night?
  * Good medication history
* Listen to relatives that state he/she “is not acting right” or Forgetful

# Exam

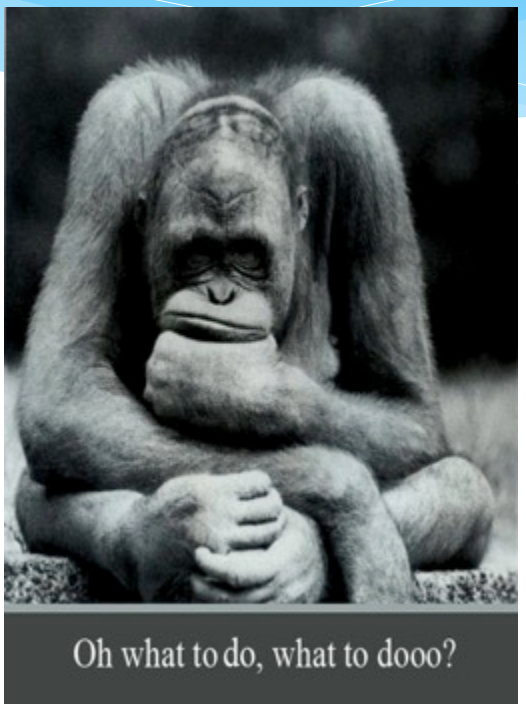
* Head to toe exam
* Neurological Exam
  * Orientation to person( including self), time and then place
  * Mini Mental test
  * CAM
  * Cranial Nerve exam

* Differential diagnosis:
  * Dementia
  * Focal Syndromes: Wernicke's aphasia, transient global amnesia…
  * Non convulsive status Epilepticus
  * Psychiatric illness

# Confusion Assessment Method Algorithm

1. Acute onset and fluctuating course
2. Inattention/distractibility
3. Disorganized thinking
4. Alteration in consciousness

Delirium if 1 and 2 with either 3 or 4



# Tests

* Vital signs
* Labs
  * Routines
  * extended electrolytes
  * Others: LFTS, Toxicology Screen, blood gas, TSH
* CXR
* ECG
* Urine
* Neuroimaging, LP, EEG if needed to exclude/ no other cause found or indicated

# ACEP Guidelines to Pharmacologic Treatment

* Undifferentiated agitation:  monotherapy with lorazepam/midazolam, droperidol or haliperidol
* Agitation and psychosis: atypical or typical antipsychotic
* Agitated and violent: combo therapy
* Coma cocktail: Thiamine, dextrose, naloxone
* Glucagon IM if no IV access for hypoglycemia
* Treat underlying cause

# Treatment continued…

* As per the American Psychiatric Association, a multi-disciplinary approach is necessary
* Provide sensory stimulation
* environmental cues and family members to orientate the patient
* Mobilize when possible
* Allow to sleep
* Provide hearing aids/glasses
* Avoid excess noise/activity
* Admit the elderly

# Points to take home:

* Hard to recognize
* Clinical trails are limited
* Attempt to rule out other common medical causes but…
* Sizable list of diagnosis- feasible for a level I trauma Center Emergency department?
* Droperidol over haloperidol

# References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