Delirium in the Emergency Department

Emergency Medicine Rounds
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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- Lethargic/withdrawn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 haloperidol
- 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
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
Francis J, Young B. Diagnosis of delirium and confusional states. Up to Date.com.

