EMC 370 Introduction to Medical Emergencies

04 Delirium

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Outcomes

At the completion of this lecture, the learner will be able to:

- Recognize the frequency of delirium (confusion) in emergency medicine.
- Organize the initial stabilization of delirium / ALOC.
- Integrate pathophysiological principles with the history, physical exam, and differential diagnosis of potentially life-threatening, reversible, and common causes of delirium / ALOC. (5-3.71)

Outcomes, continued

- Appreciate the sense of urgency for initial assessment and intervention in the patient with ALOC.
- Differentiate delirium from seizure postictal state.
- Discuss systemic illness causes of acute confusion.
- Discuss drugs that may cause acute delirium.
- Discuss drug withdrawal that may cause acute delirium.

Delirium

- Definition: A state of confusion, disorientation, dulled responses, and/or restlessness.
- Why study?
  - Frequent
  - Potential for deterioration
  - Irreversibility
- Frequency: extremely common in paramedic practice - exact incidence not established (+/- 25%)

Management

- Much the same as for coma except that patient may be mistaken for stable.
- All neurological emergencies (coma, ALOC, CVA, seizure, syncope) are on a potentially unstable continuum.
- C A B C D E / C O M E B I G
- Consider the coma cocktail

Evaluation

- Coma-like: 2 TIPS / AEIOU
- History
- Prior similar illness
- Medications
- Drug use
- PMH (adult illnesses)
- P E
- Trauma signs
- Cardiopulmonary status
- Neurological (+ /- focal)
- Meningeal signs

Life-threatening Delirium

Reversible conditions associated with acute confusion which may cause rapid cerebral damage

- Hypoglycemia
- Shock
- High blood pressure
- Respiratory failure / hypoxia
- Temperature disorder
- Poisonings (CO,…)

Differential Diagnosis

- Hypoglycemia
  - Acute ALOC
  - N,V, tremor, diaphoresis
- Poisonings (CO)
  - Acute ALOC
  - HA, N, V

Delirium verses Dementia

- Acute or chronic ALOC
- Delirium
  - Acute
  - Often "metabolic"
- Dementia
  - Chronic
  - Often structural
    - ASCVD
    - Alzheimer's

Differentiating Metabolic and Structural Causes of Delirium

Etiology	Clinical Features
Metabolic	
Intoxication Withdrawal	Fluctuations in LOC Visual hallucinations Diffuse motor disturbance (tremor)
Hypoglycemia	Acute ALOC N, V, tremor , diaphoresis
Psychiatric disease	Auditory hallucinations Oriented in time, but not situation
Seizure	Hx., PE, improving LOC
Meningitis	HA, F, irritability, lethargy

Differentiating Metabolic and Structural Causes of Delirium

Etiology	Clinical features
Structural	
mass effect tumor CVA subdural	 somnolence focal asymmetry

Illnesses Associated with Acute ALOC

- Electrolyte
  - Dehydration
  - Hyponatremia
  - Hypercalcemia
  - Not hypokalemia
- Renal failure
- Liver failure
- Respiratory failure (hypoxia)
- Cardiac failure (CHF)
- Sepsis
- Thiamine deficiency

Drugs Causing Acute Delirium

Most of these drugs cause ALOC because of an anticholinergic syndrome

- Anticholinergics
  - Scopolamine
  - Jimsonweed
- Anti depressants (TCA)
- Anti nausea (promethazine)
- Anti psychotics (chlopromazine)
- Anti histamines (diphenhydramine)
- Anti spasmotics (probanthine)
- OTC hypnotics (Sominex)
- Ophthalmics (Cyclogel)

Anticholinergic Syndrome

Treatment

- Supportive – ABC's
- R/O hypoglycemia
- R/O hypoxia
- Be prepared for seizures

Drug Withdrawal

Drugs that may cause acute delirium when in withdrawal.

- Alcohol
- Barbiturates
- Benzodiazepines
  - (diazepam)
  - (alprazolam)

Postictal Delirium

Delirium may be said to be secondary to a seizure disorder if and only if:

- Seizure is witnessed
- P M H of seizures
- ALOC gradually improving
- Metabolic acidosis improving within one hour

Delirium of Reye's Syndrome

- Pathophysiology
  - CNS and liver failure
- Epidemiology and genealogy
  - No cases beyond age 20
  - Seasonal: November - April
  - Preceding viral illness
    - Chicken pox
    - Influenza
  - ? Preceding aspirin usage

Delirium of Reye's Syndrome

Clinical Presentation

- Protracted vomiting
- Delirium progressing to coma in two days
- Decerebrate posturing
- Papilledema
- Seizures
- Hypoglycemia

Delirium of Reye's Syndrome

Prehospital Treatment

- ABCs
  - Treat hypoxia
  - Treat shock
- Treat Hypoglycemia
- Elevate HOB / mid line

Summary

We have discussed:

- Recognizing and treating acute confusional states.
- The urgency of early treatment of reversible causes of confusion.
- Common causes of acute ALOC
- Drugs and drug withdrawal states
- A few uncommon causes of acute ALOC
  - Reye's syndrome

Summary, continued

- Assessment and management much like coma with a vigilant searching for reversible causes of confusion.
- Strictly adhering to ABCDE and COMEBIG will prevent missing treatable, potentially life-threatening causes of acute delirium.