EMC 370 Introduction to Medical Emergencies

03 Coma Part 2

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Coma should NOT be assumed to be static

- A state of unresponsiveness from which the patient cannot be aroused at this time.
- This should not be considered static,
  - i.e., death or deterioration may result if immediate treatment is not given

Treatment

- ABCs / CO_2M_3EBIG
- Coma Meds
- Brief PE
  - VS and Neuro Checks every 10 minutes
- Brief history
  - AMPLE / TIPS
- Transport without delay

Airway

- C spine :
  - Basic rule of coma C+ A treatment:
  - " spinal injury, until proven otherwise "
  - i.e.. " when in doubt immobilize "
- Does this patient have a gag
  - If no gag, then ET (intubation)
  - Prevents obstruction/aspiration
  - Quick chest ET check

Breathing

- NC: 6 LPM O_2
- NRB: 100% O_2
- ET: 12-25 BPM (20)

Circulation

- Monitor
- Pulse
- Skin - color / T^0 / cap. refill
- Compress obvious hemorrhage
- BP
- IV
  - NS (KVO), or saline lock and draw blood

Disability

- If patient has an abnormality on AVPU
  - then administer coma medications
    - $D_{50}W$ 50cc IV push
    - Thiamine 50-100mg IV push
    - Naloxone 4mg IV push

Brief History AMPLE

- A llergies
- M eds
- P ast illness
  - DM
  - heart, lung, kidney, liver
  - AIDS
  - BP
- L ast meal
- E vidence (medic alert tags/ wallet, purse/ pill bottles/ scene)

2 TIPS* for Brief History

T rauma	T emperature
I nsulin	I ngestions**
P sych	P ressure
S eizure	S troke

* modified from the time honored TIPS AEIOU

** see common ingestions (& signs of these)(see slide below)

AEIOU

- A lcohols
- E lectrolytes (N,V,D)
- I nsulin OD
- O xygen
- U nder
  - underlying illnesses
    - heart, lung
    - renal [uremia]
    - liver
    - AIDS
    - BP

Under functioning

- Decreased Temp.
- Decreased thyroid
- Decreased adrenal
- Decreased renal
- Decreased liver

ABCs of Drugs	Size of pupils
A Aspirin	
Alcohols	
Antidepressants	increase
Atropine	increase
Amphetamines	increase
B Barbiturates	increase and decrease
C Cocaine	increase
Narcotics	decrease, “IV tracks”
S pSychotropic drugs (phenothiazines)	pin point

Clues to Cause of Coma

Assessment	Sign	Suggests
Pulse	severe bradycardia	H B causing syncope
BP	hypertension	I I P; stroke
	hypotension	septic shock
		MI
Respirations	slow, regular	narcotic OD; barbiturate OD
	Cheyenne- Stokes	I I P
	Kussmaul	metabolic acidosis
		midbrain lesion
Temperature	elevated	meningitis; heatstroke

Diagnostic Clues

Assessment	Sign	Suggests
Subnormal temp.	hypothermia	sepsis
		drug (alcohol, barb.)
Pupils	pinpoint	narcotic OD;
		pons hemorrhage
	fixed and dilated	diffuse hypoxia
		drug overdose
Mouth	tongue bites	recent seizure
	fruity odor	DKA
Neck	rigidity	meningitis
Extremities	needle tracks	narcotic OD
	hemiplegic	CVA
	decerebrate	brain stem compressn.

Possible Causes of Coma and Clues to their Presence

Structural	Metabolic
Trauma	DM
Stroke	OD
	Increased BP
	Meningitis
	Alcohol
	Postictal

Neuro Assessment of Coma

- Use of Glasgow coma scale
  - Usually done in every unconscious patient and observations should be recorded at least every 10 minutes

"Quick 10"

- Eye -(best 4) opens to speech = 3
- Verbal - (best 5) inappropriate words = 3
- Motor - (best 6) = 4
  - "non - localized"
  - pain withdrawal
  - without abnormal posturing

Evidence of Meningeal Irritation

- Kernig's - leg pain upon flex to extension of *K*nee
- Brudzinski's - flexion of leg when neck is *B*ent by the examiner

Structural Coma

- Usually sudden onset
- Usually lateralizing
- Located either: brain stem +/or supratentorial
- Supratentorial
  - subdural
  - stroke
  - brain abscess
  - brain tumor

Summary

We have discussed:

- Pathophysiology of traumatic and non-traumatic coma and the anatomic basis of consciousness.
- Need for rapid intervention and transport of patient with coma.
- Management of non-traumatic coma.
- Assessment findings in coma.

Summary, continued

- Avoiding vague terms such as lethargic
- Medications, dosages, indications, contraindications and route of administration for coma
- Common causes of coma in the emergency population
- Comparison of toxic/metabolic with structural/focal causes of coma