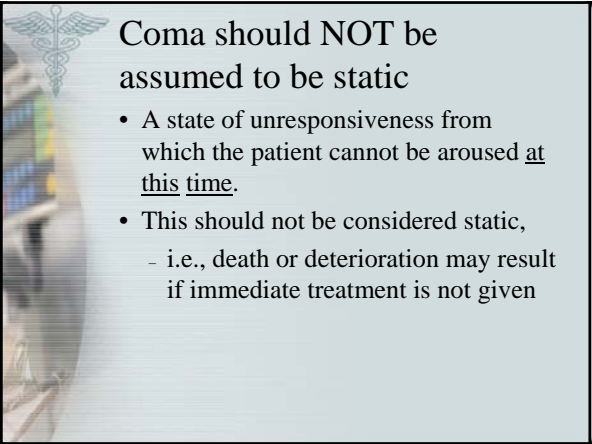




EMC 370 Introduction to Medical Emergencies

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 / CO₂M₃EBIG
- Coma Meds
- Brief PE
 - VS and Neuro Checks every 10 minutes
- Brief history
 - AMPLE / TIPS
- Transport without delay



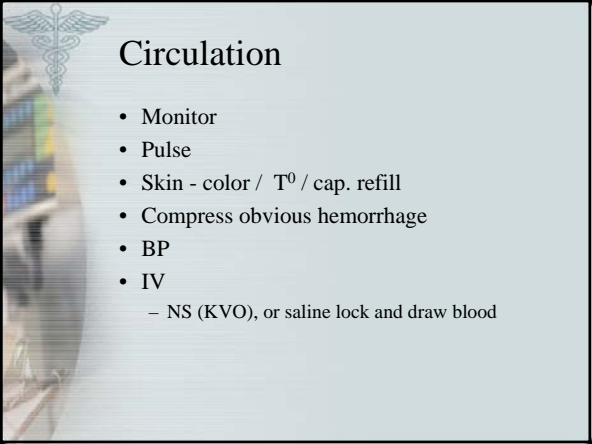
Airway

- 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 O₂
- NRB: 100% O₂
- ET: 12-25 BPM (20)




Circulation

- Monitor
- Pulse
- Skin - color / T⁰ / 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
 - D₅₀W 50cc IV push
 - Thiamine 50-100mg IV push
 - Naloxone 4mg IV push



Brief History AMPLE

- Allergies
- Meds
- Past illness
 - DM
 - heart, lung, kidney, liver
 - AIDS
 - BP
- Last meal
- Evidence (medic alert tags/ wallet, purse/ pill bottles/ scene)




2 TIPS* for Brief History

| | |
|-----------------|----------------------|
| <u>T</u> rauma | <u>T</u> emperature |
| <u>I</u> nsulin | <u>I</u> ngestions** |
| <u>P</u> sych | <u>P</u> ressure |
| <u>S</u> eizure | <u>S</u> troke |


* modified from the time honored TIPS AEIOU

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




AEIOU

- Alcohols
- Electrolytes (N,V,D)
- Insulin OD
- Oxygen
- Under
 - 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 +/- 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