Approach to the Trauma Patient

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“I have a code 1 MVA rollover approximately 10 minutes out”

so what's next...
How do assess the airway?

Airway Assessment

• Assess for patency
  – Can the patient communicate verbally?
  – Inspect for foreign bodies
  – Examine for:
    • Stridor, hoarseness, gurgling, pooled blood or secretions

KEY POINT!

Airway Assessment

• Stabilize C-spine
  – Place C-collar
  – Clearance
    • Radiographic
    • Exam
    • NEXUS
Airway Interventions

- Supplemental oxygen
- Suction
- Chin lift/jaw thrust
- Oral/nasal airways
- Definitive airways

Challenge Bowl Teaser

At What GCS should you intubate a patient?

Breathing

How do we assess a patient’s “breathing” status?
Breathing Assessment

- Airway patency does not alone ensure adequate ventilation
- Inspect
  - Deviated trachea, flail chest, open wounds
- Palpate
  - Crepitus
- Auscultate
  - Absence of breath sounds
- CXR to evaluate lung fields

Breathing Interventions

- Ventilate to 100% oxygenation
- Needle decompression if suspected tension pneumothorax
- Chest tubes for pneumothorax/hemothorax
- Occlusive dressings for sucking chest wounds
- If intubated, evaluate ETT position

Challenge Bowl Teaser

At what anatomical landmark should a needle decompression be performed?
How is circulation rapidly assessed and measured?

Circulation Assessment

- Rapid visual assessment
  - Level of consciousness
  - Skin color
  - Active bleeding
- Blood pressure
  - Assume hemorrhagic shock in all hypotensive trauma patients
- Pulses

Challenge Bowl Teaser

If a trauma patient has a palpable radial pulse you can assume that they have a SBP of > ____ mmHg.
Circulation Assessment

- Pulses
  - Carotid pulse only = SBP 60-70 mmHg
  - Carotid & femoral pulse only = SBP 70-80 mmHg
  - Radial pulse present = >80 mmHg

Circulation Interventions

- Cardiac and BP monitoring
- Stop bleeding
- Establish access
  - 2 large bore IV, Central line, IO
- Volume resuscitation
  - NS, LR, stat blood
- Cardiac tamponade

KEY POINT!
Fill the tank!
How do we assess disability?

Disability Assessment

- Abbreviated neurological exam
  - Level of consciousness
  - Pupil size and reactivity
  - Motor function

Challenge Bowl Teaser

A trauma can open eyes to loud noise, is confused but conversational, and can localize pain.

What is the patient's GCS?
Disability Assessment

Glasgow Coma Scale (GCS)

| Eye opening | | | |
|-------------|-------------|
| Spontaneous | 4 |
| To loud voice | 3 |
| To pain | 2 |
| None | 1 |

| Verbal/responder | | | |
|------------------|-------------|
| Oriented | 5 |
| Confused, disoriented | 4 |
| Inappropriate word | 3 |
| Incomprehensible sounds | 2 |
| None | 1 |

| Best motor response | | | |
|--------------------|-------------|
| Obey | 6 |
| Localizes | 5 |
| Withdraws (Resists) | 4 |
| Abnormal flexion posturing | 3 |
| Extension posturing | 2 |
| None | 1 |

Glasgow coma scale.
If a spinal cord injury is suspected in a trauma patient. What is the timeline to administer high doses steroids?

Disability Interventions

- Spinal cord injury
  - Signs
    - Unable to walk/move extremities, numbness, weakness, unconsciousness, signs of shock
  - Intervention
    - High dose steroids within 8 hours

- Elevated ICP
  - Signs
    - Any neurological deficit, lethargy, vomiting, seizure, headache, vision changes
  - Intervention
    - NS consult, elevate head of bed, mannitol, emergent decompression, hyperventilation
Exposure

What do we do to expose the patient?

• Complete disrobing of the patient
• Logroll to inspect back
• Rectal temp/exam
• Warm blankets/external warming device
• Warm fluids

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Challenge Bowl Teaser

What should you always have on your person during a trauma?
Let's try this again...

We did our ABCs... what's next?

Secondary Survey
Secondary Survey

- AMPLE history
  - Allergies, Medications, PMH, Last meal, Events preceding injury
- Head to toe physical exam
- Frequent reassessment of vitals
- Diagnostic studies
  - X-rays/CT, lab work, FAST exam

Diagnostic Aids

- Standard trauma radiographs
  - All trauma patients get a CXR
  - CXR, CTH, CT C-Spine, CT chest, CT A/P, extremity x-rays
- Standard trauma labs
  - Pregnancy test, type and screen, CBC, BMP, PT/INR, UDS, EtOH, VBG with lactate

KEY POINT!

- Patient must be monitored in radiology
- Only stable patients go to radiology
FAST exam
Focused abdominal scanning in trauma to evaluate for free fluid

Head/Neck Trauma

Chest Trauma
Take Home

- Stabilize C-spine to stabilize airway
- Remember the basics ABCDE
- If a patient is hypotensive stop bleeding and remember to fill the tank
- Life, limb, sight

Questions