5. **PJ MTP's**

PARARESCUE MEDICAL & TRAUMA PROTOCOLS

Dx= diagnosis
Rx= Treatment

Combat Shock Protocol (Hemorrhagic Shock)
Dx:

1. MOI and blood loss
2. Declining level of consciousness in the absence of head trauma, or weak/ absent radial pulse

Rx:

1. 2 lines (IV/IO)
2. TXA
3. Blood
4. Ertapenem
5. Ketamine PRN pain

Note: using PRBCs now. If Plasma is avaialable start with 2 units of plasma followed by plasma and PRBCs in a 1:1 ratio.

Severe TBI:
Dx:

1. Declining level of consciousness
2. Fixed and dilated pupil(s)
3. Posturing or weakness on one side of body
4. Irregular, snoring respirations

Rx:

1. Prevent hypoxemia (secure the airway)
2. Prevent hypotension (establish IV/IO access)
3. 250 or 500cc 3% saline
4. Elevate the head 30 degrees if no shock
5. Document GCS

Mild TBI:
Rx:

1. "bell rung", "saw stars", "stunned", loss of consciousness <30 minutes, memory loss around event
2. Perform GCS and MACE
3. Rest for 72 hours

Basilar Skull Fracture (Skull base fracture):
Dx:

1. Raccoon eyes
2. Battle sign
3. CSF rhinorrhea or otorrhea (clear fluid from the nose or ears)

Rx:

1. None
2. Document GCS
3. Transport to neurosurgeon

Oro-pharyngeal hemorrhage:
Rx:

1. Procedural analgesia (Versed 2 mg and Ketamine 20mg) and local lidocaine if responding to pain and time, tactics and clinical condition permit
2. Cricothyroidotomy
3. Pack the oropharynx with combat gauze- leave a tail for each role outside the mouth
4. Antibiotics
5. Combat shock protocol for shock

Indications for intubation:

1. Unable to maintain airway- altered consciousness, gurgling, etc.
2. Desaturation despite simple efforts and clinical deterioration- requires judgment in tactical and austere settings
3. Respiratory rates >30 and <10
4. GCS <8 (unconscious TBI patients)
5. Use RSI if the gag reflex is still intact and the patient requires intubation
6. In the uncontrolled environment if you can use means not requiring ventilator or ambu-bag and maintain adequate O2 sats then monitor the patient closely but be ready to intervene

Thoracic trauma:
Dx:

1. Chest trauma
2. Respiratory distress
3. Other physical findings if time and tactics permit

Rx:

1. Perform these in order until patient experiences relief and improved VS
2. ND x 2> 4th or 5ht interspace ant ax line or Mid ax line
3. Finger or tube thoracostomy
4. Antibiotics
5. Combat shock protocol for shock

Acute Abdomen:
Dx: can be from trauma or medical problem

1. Rigidity
2. Rebound tenderness or severe focal tenderness
3. Distension

Rx:

1. NPO, IV access. NS(normal saline) if medical, or Combat shock protocol if trauma and hemorrhagic shock
2. Ertapenem
3. NG tube
4. Foley
5. Pain meds
6. Zofran for nausea

Burns- 9, 10, 11, 20, 30

1. TBSA (total body surface area)- there are 11 "9"s. 2 front torso, 2 back torso, 1 each upper extremity, 2 each lower extremity, 1 head
2. Use Rule of 10 to start fluid resuscitation (10cc/hr x % TBSA, add 100cc/hr for each 10kg above 80 kg)
3. Start fluid resuscitation if >20% TBSA burned

4. Adjust IV fluids to maintain urine output > 30 cc/hr
5. Use ketamine for pain
6. Use dry sterile dressings to cover burns. If out > 12 hours debride dead skin
7. Put dry gauze between burned digits
8. Escharotomy as needed
9. If LR not available, begin fluid resuscitation with NS up to 2-4 L.

Penetrating Eye Trauma:

1. Vision test: document highest level of function- reads print, count fingers, hand motion, light perception, no light perception
2. Rigid eye shield
3. Antibiotics

Abdominal Evisceration:

1. Stop bleeding and clean bowel
2. Gently put back in if able, otherwise moist dressing over bowels, occlusive over that
3. Suture/ staple/ tape abdomen closed if re-placed
4. Ertapenem

Flail Chest:

1. Analgesics
2. Monitor patient for desaturation or respiratory distress
3. Positive pressure ventilation: assisted ventilations or RSI and bag/vent

Extremity Trauma:

1. Splint/ immobilize,
2. Use traction device for isolated mid- femur fractures
3. Document PMS
4. Reduce fractures and dislocations when possible
5. R/O compartment syndrome: pain out of proportion to appearance and pain with passive motion
6. Consider fasciotomy for compartment syndrome that will last >6 hours prior to definitive care

Shock: non-hemorrhagic:

1. 1-2 L of NS, except 250 cc boluses for cardiogenic shock
2. Anaphylactic- Epi, Benadryl, Decadron, Zantac (Dx- allergic stimulus, red skin, facial swelling, resp distress, shock)
3. Septic- Ertapenem, Epi if no response to NS (Dx-source of infection, fever)
4. Neurogenic- Epi if no response to NS (Dx-spine trauma, back pain, deformity of spine, weakness/paralysis/ decreased sensation, etc.)
5. Cardiogenic- FONA for chest pain, hold nitro and fentanyl for systolic BP < 90

High Altitude Pulmonary Edema

Dx:

1. Shortness of breath at rest
2. Rales
3. Pink, frothy sputum

Rx:

1. Descent
2. O2
3. Nifedine
4. Albuterol

High Altitude Cerebral Edema

Dx:

1. Ataxia
2. Confusion

Rx:

1. Descent
2. Decadron

Acute Mountain Sickness

Dx:

- Headache, listless, loss of appetite, nausea, vomiting,etc.

Rx:

- Hydration
- Advil
- Diamox 250 mg BID
- Hold any ascent until well for 24 hrs

Frostbite:

Dx:

- Hard , white tissue- frozen

Rx:

- Keep warm
- Only rewarm in 102 degree water if no risk of refreezing
- Gauze / cotton between digits
- Do not rub
- Analgeics when rewarming

Hypothermia:

- Mild- shivering, alert
- Moderate- stop shivering, confused/ obtunded
- Severe- coma. Careful to be gentle

Insulate from ground, remove wet, cover use

Hyperthermia

- Cramps, exhaustion- cool, hydrate
- Stroke- CNS findings: EMERGENCY to cool patient