ICU Management of Traumatic Brain Injury

ICP Monitoring

- Consider if GCS <8
- Target ICP ≤ 22
- Intraparenchymal device (Raumedic)
  - Monitor ICP and PbO2 (goal 25-35)
  - Target CPP 60- can consider use of vasopressors
- EVD
  - Monitor ICP
  - Drainage to be managed by neurosurgery
- Pupillometer q 1 hour for those on sedation

Elevated ICP (>22)

1. Maintain normothermia
2. HOB at least 30°
3. Increased sedation and pain management
4. Consider repeat CT brain
5. Osmotic therapy hypertonic saline or mannitol (avoid in hypotension)
6. Decompressive craniotomy
7. Check intraabdominal pressure
8. Neuromuscular blockade
9. Phenobarbital

ICU Management

- Neck stabilization
- Mid-line head
- Ensure venous drainage (no tight collar, etc)
- $PaCO_2$ 35-45
- Avoid hyper/hypo glycemia
- Glycemic management BG 100-180
- Target core temp ≤ 37° C avoid hyperthermia
- Laboratory: per standard.
  - Consider more frequent Na monitoring
- GI prophylaxis
- DVT chemoprophylaxis after 24-48 hrs if ICH
- SCD's for all pts
- SaO_2 > 94%
- HOB at least 30°
- Seizure prophylaxis for 7 days
- Call CORE when appropriate
- If indicated:
  - Use central monitoring
  - Place arterial line
- Standard Fluid resuscitation guidelines
  - Use crystalloid of choice: plasmalyte or NS
  - Target MAP 75
  - Target Na 140-145
    - Consider hypertonic saline infusion
  - No Dextrose