

## Nursing Checklist for the Management of Patient with Intracranial Hypertension

### Monitoring:

- Assess arterial line transducer level frequently
- Maintain arterial pressure, CPP and ICP alarms and target pressures
- Observe ICP waveform for signs of non-compliance
- Hourly pupil, ICP and CPP
- Do not stop sedation for neurological assessment (maintain brain rest)
- Blood gases Q6H and evaluate degree of correlation to ETCO<sub>2</sub> (at time of blood gas sample)
- Continuous ETCO<sub>2</sub> for trending
- Continuous temperature monitoring
- CEEG upon admission and until ordered discontinued
- Osmolarity and lytes Q6H if regular osmotic diuretics in use
- Glucose (target 6-8 mmol/L; hypoglycemia or hyperglycemia is bad for the brain)
- Report changes in pupils, ICP/ CPP out of target, or EVD not draining as expected.**

### Prevent Secondary Injury/Control Metabolic Rate:

- Prevent secondary injury due to hypoxemia, hypercarbia, hypotension, hypoglycemia, fever, seizures or pain/agitation
- Maintain SpO<sub>2</sub> 95%
- Maintain PCO<sub>2</sub> 35-40 (or as ordered); small increases in PCO<sub>2</sub> can cause significant spikes in ICP
- Prevent gag and cough
- Hyperoxygenate and give additional manual breaths before and after suctioning if needed to prevent suctioning induced hypercarbia (use ICP as guide, ventilator frequency might limit manual breath frequency)
- Maintain level of sedation sufficient to control ICP (dose should not exceed therapeutic need)
- Preemptive sedative/narcotic and neuromuscular blockade prior to suctioning to blunt cough
- Stop intervention/return to previous settings if ICP increases during treatment/treatment change
- Minimize stimulation, noise and lighting
- Space out nursing care and avoid clustering of activities
- Maintain normothermia
- Regular antipyretics if needed
- Prevent, rule out and treat infection

### Promote Jugular Venous and CSF Drainage:

- Head of bed 30-45 degrees/reverse Trendelenburg (ICP can be used to guide optimal position)
- Ensure C-Spine collars and trach ties are not impeding jugular veins
- Prevent gag and cough reflex
- Maintain ventilator synchrony
- Careful titration of PEEP to achieve adequate SpO<sub>2</sub> without increasing ICP
- Decompress stomach (NG)
- Monitor for abdominal distention
- Implement/maintain bowel routine
- Decreased hip flexion/consider reverse Trendelenburg for obese/pregnant patient
- Maintain drainage of CSF as per orders. Troubleshoot/report drainage problems immediately
- Continue drainage at appropriate level during transport ("off" briefly only if drain is below head)