

Craniotomy Cheat Sheet

Setup Checklist

- Bite block, esoph temp probe, tegaderm for eyes + pink tape
- ETT elbow extender
- Sed-line
- EKG monitors positioned for bed rotation*

- PIV x2
- Art-line

- Isotonic bolus fluid (NS/Plasma-Lyte)
- Carrier fluid
- Propofol gtt
- Sufenta vs remi vs IV opioid bolus
- Neo gtt
- Cardene gtt and boluses
- "Neuro box" – mannitol, decadron, Kepra, Lasix

Pre-Op	Access	Induction	Position
Neuro exam Review head imaging <input type="checkbox"/> T/S	2 nd IV Arterial line	<i>Avoid hypotension</i>	<i>Anticipate OR bed rotation</i> Tegaderm over eyes Sedation bolus prior to Mayfield pins
Anesthesia	Analgesia	Emergence	
Propofol TIVA ○ ↓ CBF ○ ↓ PONV	Sufentanil gtt vs Remifentanil gtt vs IV opioid boluses	SPB < 140 (cardene prn) Surgeons want immediate neuro exam, minimize long acting sedatives	

Special Considerations

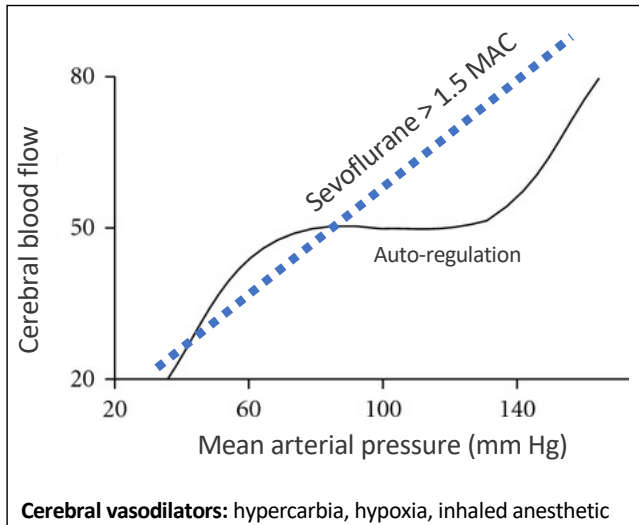
- * Pre-incision levetiracetam bolus for supra-tentorial craniotomies
 - * PRN "brain relaxation" to optimize surgical field
 - Mannitol (osmotically dries axons)
 - Furosemide
 - Decadron (reduces vasogenic tumor edema)
 - Mild hyperventilation
- Strict blood pressure control

 - * • SBP > 90 (cerebral perfusion pressure 60-70)
 - SBP < 140 (bleeding risk)

* Prevent secondary brain injury

 - *Avoid hypotension, hypoxia*

Auto-Regulation & Cerebral Blood Flow



Increased ICP Management

- **Head up** – increase venous drainage
 - **Hyperventilate** – PaCO2 25-30
Duration of effect ~1-6 hours
 - **Osmotic agents**
 - Mannitol: 0.5-1 g/kg
 - 3% NS: ~150 mL
 - 23% NS: ~30 mL – *central access req'd*
 - **TIVA** – minimizes cerebral artery vasodilation
 - **Corticosteroids** – *tumor-related vasogenic edema only*
 - 10 mg dexamethasone
- Refractory : heavy sedation, EVD, cooling, paralysis

Venous Air Embolism

- Mechanism: exposed venous sinuses above heart
- Diagnosis: TEE > precordial doppler > EtCO2
- Management
1. Flood surgical field, lower head, occlude IJ's
 2. Supportive care
 - 100% FIO2
 - Right heart inotropic support
 - Left lateral decubitus position
 3. +/- Aspirate from IJ CVC