

Critical Medications

Rapid Sequence Induction / Sedation

- Etomidate (20mg / 10mL) – Dissociative Hypnotic (Sedation)
 - 0.3 mg/kg induction dose
 - Max dose 40 mg
- Ketamine (500mg / 10mL) – Dissociative (Sedation with pain relief)
 - 1-3 mg/kg induction dose
 - Ketamine for procedural – 0.15-0.25 mg/kg
- Succinylcholine (200mg / 10mL) – Depolarizing Paralytic
 - 1-1.5 mg/kg induction dose
- Rocuronium (50mg / 10mL) – Non-depolarizing Paralytic
 - 1 mg/kg induction dose or continuing paralytic
- Propofol (200mg / 20mL) – Hypnotic
 - 1.5 – 2.5 mg/kg induction dose
 - Sedation 10 mcg/kg/min. Titrate by 10 mcg/kg/min every 10 minutes
 - Max dose of 50 mcg/kg/min
 - RAAS target of 0 to -2

| RASS score | | | | |
|-------------------------------------|-------------------|--|---|---------------------------------------|
| Richmond Agitation & Sedation Scale | | | CAM-ICU | |
| Score | Description | | | |
| +4 | Combative | Violent, immediate danger to staff | RASS ≥ -2 Proceed to CAM-ICU assessment | |
| +3 | Very agitated | Pulls at or removes tubes, aggressive | | |
| +2 | Agitated | Frequent non-purposeful movements, fights ventilator | | |
| +1 | Restless | Anxious, apprehensive but movements not aggressive or vigorous | | |
| 0 | Alert & calm | | | |
| -1 | Drowsy | Not fully alert, sustained awakening to voice (eye opening & contact >10 secs) | Voice | |
| -2 | Light sedation | Briefly awakens to voice (eye opening & contact < 10 secs) | | |
| -3 | Moderate sedation | Movement or eye-opening to voice (no eye contact) | | |
| -4 | Deep sedation | No response to voice, but movement or eye opening to physical stimulation | | |
| -5 | Un-rousable | No response to voice or physical stimulation | | |
| | | | Touch | RASS < -2 STOP Recheck later |

- Dexmedetomidine (400mcg / 100mL) – Sedation
 - 0.2 mcg/kg/hr. Titrate by 0.1 mcg/kg/hour every 30 minutes
 - Max dose 1.5 mcg/kg/hr.
- Midazolam 1 – 5 mg IV push every hour – sedation
- Ativan 0.25 – 2 mg IV push every hour - sedation
- Fentanyl 12.5 – 100 mcg IV, IM, Intranasal push every hour – pain control
 - Fast administration IV can result in ORID and chest wall rigidity
 - Interacts with Lactated Ringers
- Ketorolac 15 mg IVP push every 6 hours – pain control
 - 30 mg IM every 6 hours
- Hydromorphone 0.5 – 1 mg IV push every hour – pain control
- Morphine 1 – 4 mg IV, IM, intranasal push every hour – pain control

Vasoactive

- Norepinephrine NaCl 0.9% (8mg / 250mL) Vasoconstrictor – Alpha 1
 - 0.05 mcg/kg/min. Titrate 0.01 mcg/kg/min every 2 minutes
 - Max dose 2 mcg/kg/min
 - MAP 65 – 70 mmHg
- Dopamine (400mg / 250mL) Vasoconstrictor – Alpha 1 and Beta 1
 - 2.5 mcg/kg/min. Titrate 2.5 mcg/kg/min every 2 minutes
 - Max dose 20 mcg/kg/min
 - MAP 65 – 70 mmHg
- Epinephrine (2mg/100mL) Vasoconstrictor/Inotrope – Alpha and Beta
 - 0.02 mcg/kg/min. Titrate 0.01 mcg/kg/min every 2 minutes.
 - Max dose 0.2 mcg/kg/min.
- Epinephrine Push Dose 0.1mg (1mL of Cardiac EPI) in 9mL of NaCl 0.9%. (10mcg/mL)
 - 5 – 20 mcg IV push every 2 – 5 minutes
 - 0.5 – 2mL
 - Do not give undiluted cardiac epinephrine 1mg to patients with a pulse.
- Phenylephrine (25mg / 250mL) Vasoconstrictor – Alpha
 - 0.5 mcg/kg/min. Titrate 0.1 mcg/kg/min every 2 minutes
 - Max dose 4 mcg/kg/min.
- Phenylephrine Push Dose 10mg (1 mL) in 100 mL of NaCl 0.9% (100mcg/mL)
 - 50 – 200 mcg IV push every 2 – 5 minutes
 - 0.5 – 2 mL
 - Do not give undiluted phenylephrine to any patient
- Clevidipine (25mg / 50mL) – Vasodilator Calcium Channel Blocker
 - 1 mg/hr. Titrate **UP** 2 mg/hr every 90 seconds.
 - Titrate **DOWN** 1 mg/hr every 90 seconds
 - Max dose of 32 mg/hr.
- Nicardapine (20mg / 200mL) – Vasodilator Calcium Channel Blocker
 - 0.5 – 1 mcg/kg/min. Titrate 0.5 mcg/kg/min every 10 minutes.
 - Max dose 2.5 mcg/kg/min.
- Sodium Nitroprusside (50mg / 100mL) – Vasodilator Nitric Oxide
 - 0.3 mcg/kg/min. Titrate 0.5 mcg/kg/min every 5 minutes
 - Max dose 10 mcg/kg/min. Max dose time limit of 10 minutes.
 - Must protect from light at all times.
 - Can cause cyanide poisoning and acquired methemoglobinemia.
- Nitroglycerin (50mg / 250mL) – Vasodilator Nitric Oxide
 - 10 mcg/min. Titrate 10 mcg/min every 5 minutes
 - Max dose 400 mcg/min. Hold if SBP < 90 mmHg
 - Absolute contraindicated in patients using phosphodiesterase-5 (PDE-5) inhibitors (sildenafil citrate, vardenafil hydroxide, tadalafil)
 - Starting dose for CHF/Acute Pulmonary Edema 80 mcg/min.
- Esmolol (2500mg / 250mL) – Beta 1 Blocker

- 250 – 500 mcg/kg bolus
- 50 mcg/kg/min. Titrate **UP** 50 mcg/kg/min every 5 minutes
- Titrate **DOWN** 25 mcg/kg/min every 30 minutes
- Tachyarrhythmias. Off label for Aortic Dissection.
- Max dose 300mcg/kg/min
- Diltiazem – Calcium Channel blocker
 - (50mg / 10mL) – Bolus for tachyarrhythmias
 - 0.25 mg/kg 1st bolus – max 25mg IVP
 - 0.35 mg/kg 2nd Bolus – max 25mg IVP
 - (125mg / 125mL) – Drip for tachyarrhythmias
 - 5 – 10 mg/hr. Titrate 2.5 mg/hr every 15 minutes
 - Max dose 15 mg/hr
 - Target heartrate 60 – 90 BPM and SBP > 100mgHg
- Amiodarone – Class III antiarrhythmic (Use 0.22 Micronfilter)
 - ACLS – 300mg IVP with 150mg repeat dose
 - Tachyarrhythmia (150mg / 100mL) Bolus over 10 minutes
 - Maintenance (360mg / 200mL) 1 mg/min for 6 hours
 - Followed by 0.5 mg/min for 18 hours
- Hydralazine (20 mg/mL) – Arterial Vasodilator
 - 10 – 20 mg every 15 minutes
 - Max Dose 40mg every 4 hours
- Labetalol (5 mg/mL) – Alpha 1 and Beta 1&2 Blocker
 - 5 – 20 mg every 15 minutes

Pediatric Medications

- Acetaminophen (160mg / 5mL) 15 mg/kg
- Ibuprofen (100mg / 5mL) 10 mg/kg
- NaCl 0.9% 20 mL/kg up to 3 boluses
- PRBC 10 mL/kg
 - Infants or premie use irradiated, leukoreduced
- Dexamethasone (4mg/mL) 0.15 mg/kg – 0.6 mg/kg
- Prednisolone 1 mg/kg

Other medications

- TXA (Tranexamic acid) (1 gram / 100mL) – antifibrinolytic
 - 1 gram over 10 minutes – fast administration may worsen hypotension
 - For Trauma must be given within 3 hours of injury.
 - For HAE and ACE induced Angioedema TXA binds plasminogen and inhibits the formation of plasmin which limits kallikrein activation and bradykinin formation.
 - Not a procoagulant.
- Levetiracetam (Keppra) (1 gram / 100mL) - novel antiepileptic drug
 - 1 gram over 15 minutes
- Calcium Gluconate (2 gram / 100mL) – treatment of hyperkalemia

- 2 grams over 60 minutes
- Vesicant – avoid extravasation
- Absolute contraindication with Ceftriaxone inline administration
- Calcium Chloride (1 gram / 10mL) – ACLS / Betablocker Overdose
 - 1 gram IVP
 - 3 times more dense than Calcium Gluconate

Hyperkalemia Treatment

- 5 – 10 units Regular Insulin with 12.5 – 25 grams of Dextrose
- Albuterol 2.5 – 10 mg Nebulized
- Sodium Bicarbonate 50 mEq IVP
- Elemental Calcium
 - Stable - 2 gram Calcium Gluconate over 60 minutes
 - Unstable – 1 gram Calcium Chloride 2 – 10 minutes
- Sodium zirconium cyclosilicate – 1 package