Acute Aortic Dissection Medication Orders page 1 of 3

1. Intravenous fluids
   - 5% Dextrose with 0.45% Sodium Chloride (D_{5}W/0.45NaCl) at ______mL/hour
   - 5% Dextrose with 0.45% Sodium Chloride (D_{5}W/0.45NaCl) with 20 mEq potassium chloride at _______mL/hour
   - Lactated Ringers (LR) infuse at _______mL/hour
   - 0.9% Sodium Chloride (0.9 NS) infuse at _______mL/hour

2. Heart rate control - Control heart rate to less than 70 beats per minute PRIOR to starting vasodilators. Hold beta blockers if hypotensive – Mean Arterial Pressure (MAP) less than 60mm Hg, bradycardic – heart rate less than 60 beats per minute, heart block, or active wheezing.
   - Labetalol 20 mg IV bolus; repeat every 10 minutes to achieve heart rate less than 70 beats per minute until continuous infusion started. (Max total dose 300 mg)
   - Metoprolol (Lopressor) 2.5 mg IV Push every 2 minutes until heart rate less than 70 beats per minute. (Maximum dose 20 mg). Hold for MAP less than 60 mmHg, Heart Rate less than 60 beats per minute, heart block, or active wheezing.
   - Labetalol IV Infusion - Start at 1 mg/min; Titrate by 0.5 mg/min every 30 minutes to achieve heart rate less than 70 beats per minute. (Maximum dose 3 mg/min). Hold off Intravenous labetalol if systolic blood pressure (SBP) less than 140 mmHg and HR less than 80 beats per minute after 24 hours of oral antihypertensive.
   - Esmolol (Brevibloc) 500 mcg IV Push loading dose
   - Esmolol (Brevibloc) IV infusion _______ at mcg/KG/min. (range: 50 – 300 mcg/KG/min) Titrate up by 50 mcg/kg/min every 10 minutes to achieve heart rate less than 70 beats per minute. Hold for MAP less than 60 mmHg, Heart Rate (HR) less than 60 beats per minute, heart block, or active wheezing. Wean off Intravenous esmolol if systolic blood pressure (SBP) less than 140 mmHg and HR less than 80 beats per minute after 24 hours of oral antihypertensive.

IF beta-blockers contraindicated (wheezing) – consider diltiazem (Cardizem) unless severe hypotension – mean arterial blood pressure less than 60 mmHg, 2nd – 3rd degree heart block, or active heart failure with ejection fraction (EF) less than 35%.
   - Diltiazem (Cardizem) 0.25 mg/kg mg IV over 2 minutes - loading dose; May repeat 0.35 mg/kg IV over 2 minutes in 20 minutes if Heart Rate greater than 70 beats per minute and MAP remains greater than 60 mmHg.
   - Diltiazem (Cardizem) IV infusion at ________mg/hr. (range 5 – 15 mg/hr) Titrate by 5 mg/hr every 30 minutes to achieve heart rate less than 70 beats per minute. Hold for MAP less than 60 mmHg or heart rate less than 60 beats per minute.
3. Intravenous Antihypertensive – Goal mean arterial pressure (MAP) less than 75 mmHg and greater than 60 mmHg.

- **NitroPRUSSIDE** (Nipride) IV Infusion at ________ mcg/KG/min (range: 0.25 – 10 mcg/KG/min). Titrate by 0.25 mcg/KG/min every 5 minutes to maintain MAP less than 75 mmHg and greater than 60 mmHg. Heart rate must be controlled to less than 70 beats per minute PRIOR to starting. Wean off Intravenous nitroprusside if systolic blood pressure (SBP) less than 140 mmHg after 24 hours of oral antihypertensive.

- **Nicardipine** (Cardene) IV infusion at _______ mg/ hour (range: 5 – 15 mg/hour). Usual starting dose 5 mg/hr. Titrate by increments of 2.5 mg/hour every 5 – 15 minutes to achieve MAP less than 75 mmHg and greater than 60 mmHg. Following achievement of desired blood pressure, reduce infusion rate to 0.5 mg/hour and titrate as necessary to maintain MAP less than 75 mmHg. Heart rate must be controlled to less than 70 beats per minute PRIOR to starting. Wean off Intravenous nicardipine if systolic blood pressure (SBP) less than 140 mmHg after 24 hours of oral antihypertensive.

- **NitroGLYCERIN** IV infusion at ________ mcg/min. (range: 10 – 200 mcg/min). Titrate 5 mcg/min every 5 minutes to MAP less than 85 and greater than 60 mmHg. Wean off Intravenous nitroglycerin if systolic blood pressure (SBP) less than 140 mmHg after 24 hours of oral antihypertensive.

- **Enalaprilat** (Vasotec) 1.25 mg IV Push over 5 minutes every 6 hours (max dose 20 mg/day)

4. Oral Antihypertensives:

**Physician Guideline:** Start oral medications in the first six (6) hours; unless contraindicated. Titrate or add additional agents if primary BP or HR targets are not met (Targets are mean arterial pressure less than 75 mmHg and Heart Rate less than 70 beats/minute).

**Nurse Instructions:** Wean off Intravenous antihypertensive if systolic blood pressure (SBP) less than 140 mmHg and HR less than 80 beats per minute after 24 hours of oral antihypertensive.

**Beta blockers:**

- Labetalol 200 mg orally every 8 hours  Hold for heart rate less than 60 beats per minute or MAP less than 60 mmHg.

- Carvedilol __________ mg orally every 12 hours (suggested starting dose 3.125 to 6.25 mg) – use instead of labetalol if EF less than 40%. Hold for heart rate less than 60 beats per minute or MAP less than 60 mmHg.

- Metoprolol (Lopressor) __________ mg orally every 12 hours (suggested starting dose 25 – 50 mg  Hold for heart rate less than 60 beats per minute or MAP less than 60 mmHg.

**Antihypertensives:**

- Nifedipine XL 30 mg orally daily – hold for MAP less than 60 mmHg

- Lisinopril __________ mg orally daily (suggested starting dose 10 to 20 mg) hold for MAP less than 60 mm Hg

- Chlorthalidone 25 mg orally daily - hold for MAP less than 60 mmHg
Antihypertensives continued:

- **Hydralazine**: 25 mg orally every 8 hours - hold for MAP less than 60 mmHg
- **Clonidine**: 0.1 mg orally every 8 hours - hold for MAP less than 60 mmHg
- **Minoxidil**: 5 mg orally daily - hold for MAP less than 60 mmHg

5. **Vasopressors** – Goal mean arterial pressure (MAP) greater than 60 mmHg and less than 75 mmHg.

- **DOPamine IV infusion** at _______ microgram/kilogram/minute (mcg/KG/min). (Range: 2 – 20 mcg/KG/min). Titrate to maintain MAP greater than 60 mmHg and less than 75 mmHg.

- **Norepinephrine (Levophed) IV infusion** at _______ mcg/min. (Range: 2 – 140 mcg/min). Titrate to maintain MAP greater than 60 mmHg and less than 75 mmHg.

- **Vasopressin IV infusion** at _______ units per hour. (Range: 1 – 6 units/hour). Titrate to maintain MAP greater than 60 and less than 75 mmHg.

6. **Pain Control and Sedation**:

- **Acetaminophen (Tylenol)**: 650 mg, oral every 4 hours as needed for mild pain or temperature greater than 38.3 degrees Celsius.

- **Oxycodone 5 mg with acetaminophen 325 mg (Norco)**, 1 tab orally every 4 hours as needed for moderate pain.

- **Morphine sulfate**: 2 mg IV Push every one hour(s) as needed for moderate to severe pain.

- **Fentanyl IV infusion** – dose per visual analog scale (VAS) per continuous sedation protocol.

- **Propofol IV infusion** per continuous sedation protocol (range: 5 – 80 mcg/KG/min). Titrate per continuous sedation protocol to maintain Motor Activity Assessment Score (MAAS) of 3. Discontinue at least one (1) hour prior to extubation.

7. **Protocols**

- **For Surgical Patients**, use Surgical and Neuro Intensive Care Unit Glycemic Control Protocol (goal glucose 100 to 130 mg/dL).

- **For Medical Patients**, use Medical and Cardiac Intensive Care Unit Glycemic Control Protocol (goal glucose 140 to 180 mg/dL).

- **Intensive Care Unit (ICU) Potassium, Magnesium, and Phosphate Electrolyte Replacement Protocol** – contact surgeon, Nurse Practitioner (NP), Physician's Assistant (PA) or Surgical ICU (SICU) resident if creatinine greater than 2.5 mg/dL.

8. **Other**

- **Prochlorperazine (Compazine)**: 10 mg IV Push every 6 hours as needed for nausea or vomiting.

- **Famotidine (Pepcid)**: 20 mg IV Push every 12 hours.

- **Ranitidine (Zantac)**: 150 mg oral twice daily.

- **Sennosides 8.6 mg/docosuate sodium**: 50 mg (Senekot S) 1 tablet orally twice a day as needed for constipation.