

STROKE ICH CRITICAL CARE

Stroke Orders-Intracerebral Hemorrhage Critical Care

VTE PROPHYLAXIS ORDERS

A VTE Risk Assessment and appropriate treatment or a contraindication to treatment is required for all patients.

Patient has the following VTE Risk:

- Low VTE Risk (No prophylaxis needed)
- Moderate VTE Risk (Please Order EITHER mechanical (SCD) or pharmacological prophylaxis)
- High VTE Risk (Please Order BOTH mechanical (SCD) or pharmacological prophylaxis)

Contraindications

Reason for withholding Mechanical VTE prophylaxis (check one)

- | | | |
|--|---|---|
| <input type="checkbox"/> Hypervolemia | <input type="checkbox"/> Congestive/Chronic heart failure | <input type="checkbox"/> Sensory neuropathy |
| <input type="checkbox"/> Edema of leg | <input type="checkbox"/> Palliative care | <input type="checkbox"/> Refusal of treatment by patient |
| <input type="checkbox"/> Surgical procedure on lower extremity | <input type="checkbox"/> Injury of lower extremity | <input type="checkbox"/> At risk for falls |
| <input type="checkbox"/> Comfort measures | <input type="checkbox"/> Dermatitis | <input type="checkbox"/> Skin graft disorder |
| <input type="checkbox"/> Amputee-limb | <input type="checkbox"/> Peripheral ischemia | <input type="checkbox"/> Peripheral vascular disease |
| <input type="checkbox"/> Deep vein thrombosis of lower extremity | <input type="checkbox"/> Deformity of leg | <input type="checkbox"/> History of occlusive arterial disease of lower extremity |
| <input type="checkbox"/> Suspected deep vein thrombosis | <input type="checkbox"/> Treatment not tolerated | |
| | <input type="checkbox"/> Vascular insufficiency of limb | |

Reason for withholding Pharmacologic VTE prophylaxis (check one)

- | | | |
|---|--|--|
| <input type="checkbox"/> Blood coagulation disorders | <input type="checkbox"/> Palliative care (for end of life) | <input type="checkbox"/> At risk for falls |
| <input type="checkbox"/> Bleeding or at risk for bleeding | <input type="checkbox"/> Comfort measures | <input type="checkbox"/> Hemorrhagic cerebral infarction |
| <input type="checkbox"/> Renal impairment | <input type="checkbox"/> Anticoagulant allergy | <input type="checkbox"/> Medications refused |
| <input type="checkbox"/> Anticoagulation not tolerated | <input type="checkbox"/> Platelet count below ref | |

- Leg compression device to be placed within 4 hours of Admission

DIAGNOSIS: Intracerebral hemorrhage

ADMIT

- Admit as Inpatient. Preferred unit: Medical ICU [Evidence](#)

Reason to admit: _____

(The physician must document the reason for inpatient).

CODE STATUS

REMINDER: For DNAR status complete separate DNAR Physician Order Set

SKIN TREATMENT AND PREVENTION

- Initiate designated skin set: If Braden score of 18 or less initiate Skin Treatment and Prevention short set. For any other skin issues initiate designated skin order set(s).

NURSING

REMINDER: GCS score/ICH score/SAPS [Evidence](#)

- Initiate Full NIH Stroke Scale on admission and at discharge
- Neurologic checks Q1 Hr and Prn
- RN bedside swallow screen on admission prior to any Po intake : [Evidence](#)
- Notify Neurosurgeon/ Neurologist (if neither then Attending) If:
 - change in neurologic status,
 - change in level of consciousness,
 - change in pupil size/reactivity,
 - unexplained vomiting,
 - increased agitation,
 - worsening headache

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MEDITECH NAME: STROKE ICH CRITICAL CARE

MEDITECH MNEMONIC: NE.STIHC

ZYNX= Stroke Intracerebral Bleed ADM

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Anticoagulation reversal medications (For patients with elevated INR AND on warfarin)

REMINDER: An antiplatelet agent may be considered for preventing ischemic stroke for patients with a relatively lower risk of cerebral infarction (eg, atrial fibrillation without a history of ischemic stroke) and a relatively higher risk of amyloid angiopathy (eg, older patients with lobar intracerebral hemorrhage) or very poor overall neurologic function. [Evidence](#)

REMINDER: For patients with a very high risk of thromboembolism, consider restarting warfarin 7 to 10 days following the onset of symptoms. [Evidence](#)

For INR 1.8 to 3.9 *Physician to select ONE dose only*

- Vitamin K 1 mg IVPB over 15 mins x 1 dose. Do not give if given in ED.
- Vitamin K 2 mg IVPB over 15 mins x 1 dose. Do not give if given in ED.
- Vitamin K 10 mg IVPB over 15 mins x 1 dose. Do not give if given in ED.

For INR 4 or greater *Physician to select ONE dose only*

- Vitamin K 2 mg IVPB over 15 mins x 1 dose. Do not give if given in ED.
- Vitamin K 10 mg IVPB over 15 mins x 1 dose. Do not give if given in ED.

CNS medications: Increased ICP management *Physician to select either Mannitol OR Hypertonic Saline OR one Mannitol order AND Hypertonic Saline order below*

REMINDER: The use of mannitol and hypertonic saline for the management of increased ICP is controversial, particularly within the 1st 24 Hrs.

- Mannitol (0.25 Gm/Kg)** = _____ Gms IVPB over 30 mins Q 4 Hrs Prn ICP > 20 mmHg. Keep serum osmo < 315 and maintain euvoolemia. Hold Mannitol if serum sodium is \geq 155 mEq/dL. (use a 1.2-micron filter),
- Mannitol (0.5 Gm/Kg)** = _____ Gms IVPB over 30 mins Q 4 Hrs Prn ICP > 20 mmHg. Keep serum osmo < 315 and maintain euvoolemia. Hold Mannitol if serum sodium is \geq 155 mEq/dL. (use a 1.2-micron filter),
- Mannitol (1 Gm/Kg)** = _____ Gms IVPB over 30 mins Q 4 Hrs Prn ICP > 20 mmHg. Keep serum osmo < 315 and maintain euvoolemia. Hold Mannitol if serum sodium is \geq 155 mEq/dL. (use a 1.2-micron filter),
- Hypertonic Saline (Sodium Chloride 3%)** 200 mL IVPB over 20 mins Q 4 Hrs Prn ICP > 20 mmHg. Hold if serum sodium < 134 or > 160 mEq/dL. If both mannitol and hypertonic saline are ordered - start with Mannitol and alternate with Hypertonic Saline after 2 Hrs.

CNS medications: Antiepileptics

REMINDER: Appropriate antiepileptic therapy should be used to treat clinical seizures. [Evidence](#)

REMINDER: For patients with lobar intracerebral hemorrhage, consider the use of a brief period of antiepileptic prophylaxis to decrease the risk of early seizures. [Evidence](#)

- Phenytoin (Dilantin) (17 mg/Kg) = _____ mg in NS 150 mL IVPB x 1 dose If not given in ED (Rate not to exceed 50 mg/min, if patient is > 65 years, rate not to exceed 25 mg/min.)
- Phenytoin (Dilantin) 100 mg IV Push Q 8 Hrs. Start 8 Hrs after completion of loading dose (if ordered).

CNS medications: Paralytic

REMINDER: Ensure sedation and analgesia are optimal prior to initiation of paralytic therapy.

REMINDER: Use only in mechanically ventilated patients if needed for ICP or Ventilator Control.

- Vecuronium (Norcuron) continuous IV infusion, start at 1 mCg/Kg/min and titrate up by 0.25 mCg/Kg/min or down by 50% after each train of four test to maintain train of four with neuromuscular stimulator goal 1-2 of 4. (max dose = 1.75 mCg/Kg/min) ** For Critical Care use only. DC when transferred out of Critical Care unit.**

CNS medications: Sedatives **For intubated patients only**

REMINDER: For Propofol or Midazolam IV drip order – Use “Sedation Ventilator SS - CC”

Cardiac medications: Anti-hypertensives – (Preferred Treatment) [Evidence](#)

- LaBETalol (Trandate) 20 mg IV Push over 2 min Q 10 min Prn SBP > 150. If SBP remains > 150 after 60 mg (3 doses), contact MD for alternative orders. Hold for HR < 50 and notify MD. Maximum total dose = 300 mg/24 Hrs.
- HydrALAZINE (Apresoline) 10 mg IV push over 2 min Q 1 Hr Prn SBP > 150 if unable to give

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laBETalol. ** For Critical Care, Med Tele, and Cardiac Renal use only. DC when transferred out of these units.**

- LaBETalol (Trandate) 20 mg IV Push over 2 min x 1 dose Prn SBP > 150 as a loading dose prior to starting a LaBETalol continuous IV infusion.
- LaBETalol (Trandate) 200 mg/200 mL NS continuous IV infusion, start at 2 mg/min and titrate by 0.5 – 1 mg/min Q 10 mins up to a max of 8 mg/min to maintain SBP < 150. Titrate down by 0.5-1 mg/min Q 15 mins. Hold for HR < 50 and notify MD. ** For Critical Care use only. DC when transferred out of Critical Care unit.**

Cardiac medications: Anti-hypertensives – (Alternative Treatment) *Physician to select ONE drug only* [Evidence](#)

- Nitroprusside (Nipride) 50 mg/250 mL D5W continuous IV infusion, start at 0.5 mCg/Kg/min and titrate by 0.5 mCg/Kg/min Q 3 – 5 mins up to a max of 10 mCg/Kg/min to maintain SBP < 150. Titrate down by 0.5 – 0.75 mCg/Kg/min Q 15 mins. ** For Critical Care use only. DC when transferred out of Critical Care unit.**
- NiCARdipine (Cardene) 25 mg/250 mL NS continuous IV infusion, start at 5 mg/Hr and titrate by 2.5 mg/Hr Q 15 mins up to a max of 15 mg/Hr to maintain SBP < 150. Titrate down by 2.5 mg/Hr Q 15 mins. Hold for HR < 50 and notify MD. ** For Critical Care use only. DC when transferred out of Critical Care unit.**

GI medications: Anti-emetics

- Ondansetron (Zofran) 4 mg IV Push Q 12 Hrs Prn N&V. If ineffective after 30 mins, give proCHLORperazine if ordered. May give IM if no IV access.
- ProCHLORperazine (Compazine) 10 mg IV Push Q 6 Hrs Prn N&V. If ondansetron Prn is also ordered, give ondansetron first. If ondansetron ineffective after 30 mins, give proCHLORperazine as ordered. May give IM if no IV access.

GI medications: Stress Ulcer Prophylaxis/Antacids

- Famotidine (Pepcid) 20 mg IV Push BID. RN to contact pharmacy to enter Po order if pt able to take Po. Pharmacy to adjust per renal dosing protocol.

GI medications: Laxatives/Stool Softeners/etc

- Docusate sodium (Colace) 100 mg Po BID. Hold for loose stools.
- Maalox Plus (aluminum/magnesium/simethicone) 30 mL Po Q 4 Hrs Prn indigestion (product contains magnesium salt)
- Milk of Magnesia (MOM) 30 mL Po Q 6 Hrs Prn constipation (product contains magnesium salts)
- Bisacodyl (Dulcolax) suppository 10 mg PR daily Prn constipation if Milk of Magnesia (MOM) (if ordered) not effective.
- Fleet enema adult 1 bottle (133 mL) PR daily Prn constipation if Milk of Magnesia (MOM) (if ordered) and Bisacodyl (Dulcolax) (if ordered) not effective. (product contains phosphate salts)

Endocrine medications: Diabetic Therapy

REMINDER: For Subcutaneous Insulin Orders - Use Subcutaneous Insulin Short Set/Order Form

Other medications: _____

***All labs/diagnostics will be drawn/done routine now unless otherwise specified**

BLOOD BANK

REMINDER: For patients with an elevated INR, consider the use of clotting factors or fresh frozen plasma, with or without vitamin K [Evidence](#)

Type and screen- STAT

****For INR 1.8 to 3.9 (Select only one) for patients with elevated INR AND on warfarin**

Transfuse 2 units of Thawed Plasma (TPL). Indication for transfusion: [Coumadin reversal](#)

Transfuse 4 units of Thawed Plasma (TPL). Indication for transfusion: [Coumadin reversal](#)

****For INR 4 or greater (Select only one) for patients with elevated INR AND on warfarin**

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- Transfuse 3 units of Thawed Plasma (TPL). Indication for transfusion: Coumadin reversal
- Transfuse 4 units of Thawed Plasma (TPL). Indication for transfusion: Coumadin reversal

****For patients who are NOT on warfarin**

- Transfuse _____ unit(s) of Thawed Plasma (TPL). Indication for transfusion: Blood loss
- Transfuse _____ unit(s) of platelets. Indication for transfusion: Blood loss

LABORATORY - Hematology

- Complete Blood Count (CBC) - In AM
- Platelet Function Assay (PFA) - In AM
- Fibrinogen (FIB) - In AM

LABORATORY - Chemistry

- Complete metabolic panel (CMP) - In AM
- Albumin, serum (ALB) - In AM
- Lipid Panel (LPP) - In AM
- Osmolality, serum (OSMO) - In AM

LABORATORY – Blood Gas

- Arterial Blood gas (ABG)

LABORATORY - Toxicology

- Phenytoin (Dilantin) level- In AM

DIAGNOSTICS - Cardiology

- Electrocardiogram (12-lead EKG); Reason: Intracerebral Hemorrhage

DIAGNOSTICS - Radiology

- Chest X-ray 1 view (CXR), Portable on arrival in unit; Reason: Intracerebral Hemorrhage

DIAGNOSTICS - CT

- CT Brain without contrast- In AM Reason: Intracerebral Hemorrhage

DIAGNOSTICS - MRI

- MRI Angiogram cerebral without contrast. Reason: Intracerebral Hemorrhage
- MRI Angiogram, neck carotid without contrast. Reason: Intracerebral Hemorrhage
- MRI, brain without contrast. Reason: Intracerebral Hemorrhage

DIAGNOSTICS - Neurology

- Electroencephalogram (EEG); Reason: Intracerebral Hemorrhage

DIAGNOSTICS - Ultrasonography

- VIH Carotid bilateral; Reason: Intracerebral Hemorrhage

MD CONSULTS

REMINDER: Consider Specialty Referral (Neurosurgery, Neurology)

- Consult Neurosurgeon, Dr. _____
- Consult Neurologist, Dr. _____

REQUEST FOR SERVICE

- Consult Occupational Therapy evaluation and treatment for ADLs when cleared by neurosurgeon
- Consult Speech Therapy for swallow evaluation

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- Consult Physical Therapy evaluation and treatment for strengthening, mobility when cleared by neurosurgeon
- Outpatient Physical Therapy Rehabilitation Referral
- Consult Speech Therapy for speech evaluation and treatment
- Consult for Social Services
- Consult Nutritional Services; Reason: _____
- Consult for Case Management