BAPTIST HEALTH CARE

MedEd
Medical Affairs Education

Tenecteplase (TNKase) Conversion

Important Information

"GO-LIVE"
Oct 26, 2022

Baptist Health Care is moving all of our large volume alteplase indications to tenecteplase throughout the health care system.

All coordinating ordersets will be up-dated on the same go live date as ischemic stroke (10/26/22) and will reflect the appropriate dosing for each indication.

The ischemic stroke indication accounts for the vast majority of our large volume thrombolytic use, however we will also be converting to this product for the indications of ST-elevation myocardial infarction and pulmonary embolism.

Situation

Baptist Health Care is moving all of our large volume alteplase indications to tenecteplase throughout the health care system.

Background

The ischemic stroke indication accounts for the vast majority of our large volume thrombolytic use, however we will also be converting to this product for the indications of ST-elevation myocardial infarction and pulmonary embolism. BHC Pharmacies will continue to have smaller dose alteplase for our catheter clearance indications along with lower dose cath lab and interventional radiology indications.

Assessment

The "Go-Live" date for this change will be on October 26, 2022. All coordinating ordersets will be updated on the same go live date as ischemic stroke (10/26/22) and will reflect the appropriate dosing for each indication. An informational email has gone out to all BHC Practitioner and Nursing Leaders. Education on the use and reconstitution of tenecteplase is continuing for Nursing.

Recommendation

Please note go live date for the conversion of alteplase to tenecteplase. "Go–Live" is Oct 26th. All Ordersets will be changed over on the Go-Live date as well. Pharmacy can assist with any questions or dosing information as needed.

Absolute Contraindications

- Intracranial hemorrhage on CT
- History of hypersensitivity or allergic reaction to Alteplase or Tenecteplase
- Current subarachnoid hemorrhage
- Active internal bleeding
- Any intracranial or spinal surgery or serious head trauma within 3 months
- Uncontrolled hypertension at time of treatment BP> 185/110
- Arterial puncture at noncompressible site in last 7 days
- Multilobar infarction on CT
- Acute aortic dissection
- Acute bleeding diathesis
  - ◊ Current use of oral anticoagulants with PT >15 sec. or INR >1.7
  - ◊ Oral direct Factor Xa inhibitors within the last 48 hrs
  - ◊ Administration of unfractionated heparin or LMWH
  - ◊ Platelet count <100,000/mm^3 (Pts may receive platelet transfusion & be reconsidered)

BAPTIST HEALTH CARE

MedEd
Medical Affairs Education

Tenecteplase (TNKase) Conversion

Risks

Relative Contraindications due to increased risk of intracranial hemorrhage		Extended Window Risks
• Non-disabling stroke S/S	•Myocardial Infarction and/or stroke ≤3 months	• Treating patients between 3 and 4.5 hrs from symptom onset will include additional exclusion criteria:
• Rapidly improving stroke S/S	•Recent subarachnoid hemorrhage	• Age >80
• Pregnancy	•Major surgery or trauma ≤14 days	• Use of oral anticoagulants regardless of INR level
• Lumbar puncture ≤10 days	•GI or urinary tract hemorrhage ≤21 days	• NIHSS score >25
• INR between 1.4 and 1.7	•Untreated intracranial neoplasm, aneurysm, or arteriovenous malformation	• Pts with history of both diabetes and previous stroke
• Blood glucose <50mg/dL and >400mg/dL •(Tenecteplase can be considered if BG is corrected)	NOTE: Anticipated benefits for each individual case will be weighed against potential risks	

Tenecteplase vs. Alteplase properties

	Alteplase	Tenecteplase
Fibrin selectivity	medium	high
Half-life	5 min	17 min
Dosing	bolus plus infusion	single bolus

Prior to Tenecteplase administration:

Verbal Consent must be obtained by the Practitioner	CT scan
Weight (kg)	Placement of invasive lines (when indicated)
NIH	Blood glucose
Blood Pressure	Recommended tests after tenecteplase IV bolus - Twelve-lead EKG - Chest x-ray

BAPTIST HEALTH CARE

MedEd
Medical Affairs Education

Tenecteplase (TNKase) Conversion

Patient Management

- Blood Pressure and Abbreviated NIHSS
  - ◊ Every 15 minutes for 2 hours
  - ◊ Every 30 minutes for 6 hours
  - ◊ Every 1 hour for 16 hours
- Patient to be admitted to ICU
- No anticoags or antiplatelet agents during first 24 hours (i.e., aspirin, heparin, lovenox, etc.)
- Avoid NG tubes, unnecessary blood draws, invasive lines & IM injections if possible for 24 hours.
- CT or MRI 24 hours following administration

Warnings and Precautions

1) Neuro status deterioration
2) Nausea, vomiting, new headache
3) Diaphoresis
4) Gingival bleeding/oozing
5) New ecchymosis or petechiae
6) Abdominal or flank pain
7) Hemoptysis of hematemesis
8) SOB, rales, or rhonchi
9) Arrhythmias
10) Facial or oropharyngeal

Off-Label Use

At this time, tenecteplase is **only** approved for acute myocardial infarction.

In other words, DO NOT USE THE TENECTEPLASE INFORMATION INSERT FOR DOSING INSTRUCTIONS.

ALWAYS refer to Allscripts for dosing instructions.

TENECTEPLASE FOR ACUTE ISCHEMIC STROKE

Dose is 0.25 mg/kg (rounded to nearest 1 mg)
Final concentration of tenecteplase vial is 5 mg/mL

Patient Wt (kg)	Tenecteplase (mg)	Volume to be administered (mL)	Volume to waste (mL)
30-33	8	1.6	8.4
34-37	9	1.8	8.2
38-41	10	2	8
42-45	11	2.2	7.8
46-49	12	2.4	7.6
50-53	13	2.6	7.4
54-57	14	2.8	7.2
58-61	15	3	7
62-65	16	3.2	6.8
66-69	17	3.4	6.6
70-73	18	3.6	6.4
74-77	19	3.8	6.2
78-81	20	4	6
82-85	21	4.2	5.8
86-89	22	4.4	5.6
90-93	23	4.6	5.4
94-97	24	4.8	5.2
greater than or equal to 98	25	5	5

Blood Pressure Management

Labetalol
10-20 mg IV bolus over 1-2 min, may repeat x1 in 15 mins

Enalaprilat
1.25 mg IV over 5 min, x1

Nicardipine
1.25 mg IV over 5 min, x1
Intravenous nicardipine may be administered as a continuous infusion with a starting dose of 5 mg/h, and then increased by 2.5 mg/h every 5 min as needed, up to a maximum of 15 mg/h. If BP is greater than the target, despite infusion of the maximum nicardipine dose for 30 min.

Avoid a large sudden decrease in blood pressure to avoid hypo-perfusion. Ideal blood pressure goal when treating hypertension is between SBP 160-180

Tenecteplase Administration

Do not delay administration to obtain EKG or cheat x-ray unless high clinical suspicion for aortic dissection or other life-threatening condition.

- Ensure BP at time of bolus <185/110

Tenecteplase for stroke order sets

- Tenecteplase for Ischemic Stroke
- Reversal (Anticoagulant Reversal/Treatment)
- Angioedema Management after Thrombolysis with thrombolytics
- Post Thrombolytic Medication/Thrombectomy Stroke Admission Orders